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WILDLIFE CONSERVATION IN WYOMING

Wildlife Conservation in Wyoming, S... EARING

BEFORE THE

SUBCOMMITTEE ON FISHERIES, WILDLIFE AND OCEANS

OF THE

COMMITTEE ON RESOURCES HOUSE OF REPRESENTATIVES

ONE HUNDRED FOURTH CONGRESS

SECOND SESSION

ON

PREDATOR PROBLEMS IN THE STATE OF WYOMING AND HOW THEY ARE AFFECTING THE WILDLIFE AND RANCHING ON PUBLIC AND PRIVATE LANDS

APRIL 10, 1996—GILLETTE, WY

Serial No. 104–64

Printed for the use of the Committee on Resources

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WILDLIFE CONSERVATION IN WYOMING

WEDNESDAY, APRIL 10, 1996

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON FISHERIES, WILDLIFE AND OCEANS,
COMMITTEE ON RESOURCES,
Gillette, WY.

The Committee met, pursuant to call, at 11:06 a.m., in the Wyoming Room, Campbell County Public Library, Gillette, Wyoming, Hon. Jim Saxton (Chairman of the Subcommittee) presiding.

STATEMENT OF HON. BARBARA CUBIN, A U.S. REPRESENTATIVE FROM WYOMING

Ms. CUBIN. I think we are ready to start. First of all, I would like to thank everyone for being here today.

As you know, predators in Wyoming are a problem. And we want—we really are open about this whole process. We are here to gather information. We hope that we will be able to establish some things that we can all agree on. Are predators a problem for wildlife? Are predators really causing a big loss in wildlife; and if they are, what do we do——

VOICE. We cannot hear you.

Ms. CUBIN. Is this not on maybe?

[Pause.]

Ms. CUBIN. Should I shout? Does that help?

VOICE. That is better.

Ms. CUBIN. OK. Thank you all for being here. Please raise your hands if you find that you cannot hear us.

I would first like to thank Congressman Jim Saxton from New Jersey for allowing us to have this hearing. He is the Chairman of the Subcommittee that is in charge of this issue and he certainly has traveled a long way and he is going straight back. So, he has put in a lot of work for us and we should let him know how we appreciate that. Gillette, Wyoming, is by no means a hop, skip and a jump from New Jersey, Jim, and we know it and we appreciate it.

The purpose of the hearing is to discuss the predation of wildlife and livestock specifically by coyotes, golden eagles and wolves and to examine the effectiveness of non-lethal means of predator control. In lieu of simply reacting to predation problems, I think it is important that we focus on methods of prevention which can serve wildlife while protecting the rights of private property owners. I think that has to be one of the central issues. We have to always keep in mind the rights of private property owners because that is what our whole economy, our whole country is based upon. I trust

that today's witnesses will help provide some guidance as to how best to achieve these goals. And as I said, maybe we can all come to some sort of meeting of the minds.

According to the National Agricultural Statistic Service, predators accounted for 41.8 percent of all losses for both sheep and lambs. The leading cause was coyotes at 61.9 percent of the total, followed by wild dogs, which is an emerging problem in Wyoming, with 9.1 percent and mountain lions, cougars and pumas at 6.8 percent. I always say pumas but I am told that is not right. In 1990, sheep and goat producers lost an estimated $27.4 million due to predation. In 1991, cattle producers losses to predators were more than $41.5 million. Coyotes alone caused $13.5 million in sheep losses and 5.6 million in goat losses. I believe the cattle losses were $24.3 million nationwide. Well, certainly that is not the kind of money we can afford in this economy today and in our state, to just allow to be, you know, wasted, if, in fact, waste is the right word to use. The problem is, of course, the livestock, the sheep, the goats, the cattle are owned by people. They are their private property and yet because of regulations by the Federal Government and by other agencies, people are not allowed to protect their private property many times.

In the western United States, coyotes have proven consistently to be the most deadly to sheep and lambs and their populations have steadily been increasing—that of coyotes, I mean. Coyotes have also proven to be very adaptable, and while some non-lethal methods of predator control such as strobe lights and sirens work well in the short-term, coyotes quickly learn these methods will not harm them. Truman Julian will probably be able to tell you more about that. But predation problems are not unique to the coyote, particularly in Wyoming.

Wyoming must also shoulder the burden of recovery efforts associated with the grizzly bear. I am told up in the North Fork, up around Cody, that people do not even allow their kids to walk to school because there are so many grizzly bears in the area that people who live out of the city have grizzly bears coming into their yards and going through their garbage. There are many, many grizzly bears in that area and yet they remain on the endangered species list; therefore peoples' hands are tied on how they can deal with the losses that they have due to grizzly bears. Fortunately, to this point, I do not believe there are any human losses. But certainly children who live in the country and are used to running and playing and doing the things that children do could be a possible fatality for the grizzly bear.

Of course, the bald eagle and the gray wolf are also predators that are of concern to us. With the reintroduction of the gray wolf into Yellowstone Park, livestock losses have been attributed to this predator in Idaho, Montana and I have little doubt that losses are soon to occur in Wyoming. If these recovery efforts are national goals, then the Federal Government, not livestock producers or the state, should bear some responsibility for their actions. If the country as a whole—in other words, if the Congress determines that—or in this case, the Department of Interior determines that the gray wolf is in Yellowstone for the public good, then it seems only right to me that the public should pay for that good. That that good

should not be—or that presumed good should not be dumped on the shoulders of the people who live in the area by sacrificing their private property for the good of society. We should all pay our share if that is the case.

I think it is interesting that the gray wolf was introduced into Yellowstone and one of the reasons that they gave for the introduction was that it would increase visitation in Yellowstone and now they are trying to cut access—trying to lower visitation because there are too many tourists, there are too many people in Yellowstone Park. So, I think sometimes we are not consistent with what we do at the government level and we are certainly not helpful, although we want to be and we try to be. I do not think anybody sets out to just hurt somebody else or do something that is damaging to them but that does in fact happen.

I have talked way too long. I do thank you all for being here and I especially thank Mr. Saxton and his staff—or Lisa, who has done so much work. Thank you.

STATEMENT OF HON. JIM SAXTON, A U.S. REPRESENTATIVE FROM NEW JERSEY; AND CHAIRMAN, SUBCOMMITTEE ON FISHERIES, WILDLIFE AND OCEANS

Mr. SAXTON. Well, Barbara, thank you very much for making it possible for the Committee to convene here today to discuss this really important issue.

Some of you probably know that this year in Congress we were fortunate to be joined by a number of new Members. When the Congress convened in January of 1995, one of the first new Members that I met was Barbara Cubin and we got to be good associates. We both are members, as you can see, of the Resource Committee. I think all of you should know that Barbara is one of our most productive members. And by productivity, we mean bringing problems from back home to Washington, so that those of us who do not experience those issues on a day-by-day basis can become informed about those issues. And Barbara has just been great at that on the Committee both in a formal sense and in an informal sense in helping us to understand some of the problems from Wyoming and other western states. So, I want to begin by thanking Barbara for making my job a whole lot easier than it would otherwise be.

You are really benefited by a great delegation to Washington, Senators Thomas and Simpson are great folks and we appreciate their input a lot, as well. I am, for one, going to miss Alan Simpson. He is retiring this year and he is a breath of fresh air in Washington and we want you to know that, as well.

Let me tell you how I came to be here. I did not wake up one morning and say I want to go to Wyoming and learn about predator issues. It happens that a friend of mine and I decided that it would be a neat thing to do about a year ago to go antelope hunting. And since Barbara was my friend, I called Barbara on the phone and I said you have antelope in Wyoming, do you not?

[Laughter.]

Mr. SAXTON. And she said, well, we sure do and I said, well, Bill Menges, my friend, and I would like to go antelope hunting. Do you think you could help us out? Well, it was a great trip. We came out

here last November and stayed in Casper. We got up at 0-dark–30, rode what is a short distance for all of you, about two hours to a location just north of Hole-In-The-Wall and by 11:00 or 12:00, the three of us had killed three antelope. And we enjoyed that.

The next day, since we had done so well on our hunt and since we had decided that we were going to stay here for several days, Barbara's aide, Jackie King, who is in the back of the room, arranged for my friend and I to go on a cattle drive. Well, if you can imagine two New Jerseyans riding 22 miles on horseback—but we had a great time. And when we got to the—this story has a conclusion to it. When we finished the cattle drive we were hosted on a ranch for lunch which was the destination of the cattle drive. I stood by a pickup truck and the fellow who owned the pickup truck was visiting on the ranch and the rancher who lived there said my goodness, that is a nice truck. And I said it looks like a good truck. And they went on to say that the fellow who owned the truck had gone to Denver and had shopped and had gotten a really good buy and the rancher said gee, I would like to have a truck like that. And I said well, why do you not buy one? He said I do not make that much money in a year.

Now, this was my first little eye opener. You know, when easterners think about ranches that are 30 or 40 or 50,000 acres, we think about money because land where I come from is worth more than 10 or $20,000 an acre, depending on where it is. And so, when easterners think about those kinds of land masses, we think about big money. And I found out that ranchers here do not make big money. And those cattle that we drove out of the mountains into the winter pasture that day—well, I kind of followed along, I did not do much driving. You know, we found out that, if the price of beef goes down, that rancher has a tough time making ends meet. We found out that if something happens to some of that livestock, they have a tough time making ends meet.

And so, we then had this wonderful lunch and while we were eating lunch, I said to the rancher, what is it that you would like to see the Federal Government do in order to make your life better in Wyoming? He said, well, number one, the Federal Government might like to stay out of our hair a little bit more or try to become involved in our lives a little bit less. That would be helpful.

And number two, he said, we have got this tremendous problem with predators. He said we have got coyote problems. In some parts of the state, we have golden eagle problems and in some parts of the state we have grizzly bear problems and in some parts of the state, now we understand, he said back then, they are going to introduce wolves back into Yellowstone and we do not know what that means.

So later, I said to Barbara, why do we not look into this issue so that I can become more informed about it and so that we can deal with it if we need to on the Subcommittee. So that is how we happen to be here today.

What we hope to accomplish is this; there are a number of agencies that deal with this problem, some effectively, some perhaps not so effectively. And those agency efforts on the state and Federal level ought to be coordinated so that we can see what it is that needs to be done and so that it can be done in a coordinated, effi-

cient fashion. We also need to recognize that there are research opportunities through which we may find solutions to some of the predator problems and we need to look at that. And we also need to look at whether or not it would be a good idea to look at some kind of legislation through our Committee and in the Congress as to some possible solutions to the predator problems that you all know a whole lot more about than I do.

So for those reasons, I am happy to be here and I look forward to hearing from our witnesses this morning. So with that, let me just announce we are going to have three panels. So at this point, I would like to call the first panel forward.

We are going to hear first from Ron Micheli, who is the Director of the Wyoming Department of Agriculture. We are also going to here from Bobby Acord, who is the Deputy Administrator of the Office of Animal Damage Control for the U.S. Department of Agriculture; and we are going to hear from Gary Shorma, who is the Regional Wildlife Supervisor of the Wyoming Game and Fish Department. If you folks would come forward at this point? We have a nameplate here for each of you and we are anxious to hear your testimony.

Ms. CUBIN. Please forgive me for not introducing my staff. Mantha Phillips is my new state director. She is based in Casper, but she does travel the state. So feel free to call her in Casper. And Jackie King is a Casper representative, also.

Thank you.

Mr. SAXTON. And this is Sharon McKenna, who is my right-hand person on the Committee.

Let me just say before we start that there is one bit of housekeeping. There are some members of the Subcommittee who are not here today who are interested in this, so we do this little thing about asking unanimous consent that their written statements be included in the record. And the other bit of housekeeping is, you will notice that in front of you there are three lights. We will certainly put your entire testimony in the record, but for purposes of the limited time that we have today, we have those lights which indicate—when the red light comes on, you have used five minutes and we would appreciate you summarizing as soon thereafter as possible. We also want to ask unanimous consent that the record will remain open for 30 days for comment from the public.

You cannot hear?

VOICE. No.

Mr. SAXTON. OK. Sorry about that.

OK, Mr. Ron Micheli, would you like to begin, please.

STATEMENT OF RON MICHELI, DIRECTOR, WYOMING DEPARTMENT OF AGRICULTURE

Mr. MICHELI. Thank you, Congressman.

First of all, let me enter that I am representing the Governor of the state of Wyoming, Jim Geringer, in this testimony today. He sends his regrets at not being able to attend today. He has a previous commitment with the Tribal Council on the Wind River Indian Reservation today, and would have liked to have been here.

We extend our thanks to you for the opportunity of testifying before this Subcommittee. On behalf of the citizens of Wyoming, we

welcome you to the great state of Wyoming and we welcome the opportunity that we have to share with you the concerns that we have with predators and the devastating and demoralizing effect that they are having not only on our livestock industry but on our wildlife population as well.

While I appreciate the courtesy extended to me to be the first witness at this hearing, it does present some challenges. You will hear a great deal of testimony today dealing with statistics and numbers. In order to understand the magnitude of the predator problem in Wyoming, statistics and numbers are a necessary component. But as Representative Cubin said, we must get beyond the statistics and the numbers and offer, I think, some solutions to the problems. I would hope that at least part of my presentation would offer some workable solutions that can help not only the state of Wyoming, but you in the Congress as well. That all being the case, my challenge then, as the first witness, is to lay out the seriousness of the problem, but also to follow up with helpful suggestions that will solve the problem.

A few statistics would outline the seriousness of the situation. Representative Cubin has already done some of that. Wyoming ranks third in the Nation in the production of lamb and sheep, whose monetary value of receipts contribute to Wyoming's third largest industry, that being agriculture and more specifically, the livestock industry. At its peak, Wyoming saw almost four million head of sheep in this state. Currently, our inventory is about 790,000 head. Wyoming sheep producers lost 66,000 head of sheep last year to predators. Equating this to a dollar amount, the loss in 1995 was nearly $4 million. Since 1993, we have lost 500 sheep producers in this state and 200,000 head of sheep in two—in three years. The sheep industry in this state is literally on the brink of being non-existent. It is my opinion that the main factor for this devastating and demoralizing effect is that of predators and predation.

Perhaps an analogy would be appropriate. We lose millions of dollars each year in this nation to shoplifting. We are justifiably concerned for retail merchants who lose inventory to those who take without paying. We have passed strict laws in Wyoming and throughout this nation that deal with two-legged shoplifters because we know in the end that we all pay for that crime. And yet, as serious as the crime of shoplifting is, the percentage loss nationwide is less than five percent of the total inventory of retail merchants. We are dealing today with a four-legged predator—a four-legged shoplifter, if you will, who is taking in excess of 10 percent of the total inventory and in some cases in Wyoming is approaching 25 percent. What retail merchant could withstand that type of a loss? If shoplifting were approaching those kinds of statistics nationwide, there would go up a hue and cry for government to take some kind of action to address the problem. On the one hand, we want to punish the two-legged shoplifter and remove them from our society, but the four-legged shoplifter is allowed more and more freedom to do his thing, and in fact, any attempt to control his behavior is met with some resistance at the national level.

This brings me then to one of the most frustrating problems dealing with predators. More and more, we, not the shoplifter are being

handcuffed by the Federal Government to do predator control. Tools that have been available to us for years are now being taken away. Target-specific and effective controls have increasingly been banned for use on federally managed lands. Two examples will suffice. M–44s are effectively being removed from the—by the Federal Government on public land and aerial hunting is becoming more and more difficult to do.

Briefly, that is our problem. As I said, I would like to offer a constructive solution to the problem. We believe that if we are given the controls and the tools to control predators, that we in Wyoming could do the job. Currently, the Federal Government spends about $900,000 a year on predator control in this state. We would suggest that Congress consider utilizing the block grant program and turning the control of predators over to the states. We would not, however, be interested in administering this program if there would not be an attending relaxation of the rules and regulations that accompany the Federal program. We are convinced that we can do a better job of utilizing the money for predator control if we were given the flexibility to do the job. Predator problems differ from state to state. Public attitudes differ from state to state and solutions vary from state to state. Just give us the authority to administer our own program and give us the flexibility to cut through the burdensome Federal bureaucracy that ties our hands to do predator control and you will see an effective predator control for Wyoming citizens.

We believe that this suggestion is in keeping with the current Congressional philosophy of decentralizing government and in giving relief from Federal intervention. We would further suggest that states be given the option of the block grant. There may be some who would prefer to stay in the Federal program and if they do, we would say fine, but we would like the option to opt out.

One last analogy. Currently, the buzz word in Federal Government on Federal lands is noxious weeds. The Forest Service and the BLM are spending millions and millions of dollars to fight the spread of noxious weeds, and rightfully so. We all fear that noxious weeds have the potential to invade and take over healthy plant systems and ruin entire ecosystems. The Forest Service has regulations so severe that ranchers and outfitters and other users of the forest cannot take hay onto the forest ground that is not certified free of noxious weeds. The Federal land managers are justifiably concerned that one species of plant not be allowed to invade our land and take over the healthy balance of nature. It seems that what is good for plants is different for animals. The predator has much the same potential to take over entire ecosystems as the noxious weeds. The Environmental Impact Statement dealing with the reintroduction of the wolf into Yellowstone Park says that the reintroduction of the wolf will mean a 20 percent loss of available elk in that area, and that is only occurring with a minimum number of wolves. The predator is at the top of the food chain. There is nothing to predate on him. But unlike the noxious weed, we falsely assume that nature will protect the health of the animals. On the one hand, then, we protect the plants from being predated upon by noxious weeds and spend millions of dollars to control their spread, and on the other hand, we continue to restrict the control of animal

predators who have the same capability to overrun our livestock and our game populations.

I hope that we have covered the essentials in a brief period of time. Please know that we stand ready and willing to help find a solution to this real problem with predators. I will be available to work at any time with the Congress or the executive branch to address this issue. Again, we thank you for coming to our state.

Mr. SAXTON. Thank you very much.

Mr. Acord.

STATEMENT OF BOBBY ACORD, DEPUTY ADMINISTRATOR, OFFICE OF ANIMAL DAMAGE CONTROL, UNITED STATES DEPARTMENT OF AGRICULTURE

Mr. ACORD. Thank you. I am pleased to be here today to have the opportunity certainly to enjoy this nice Wyoming weather. It is a little different than what we have had back where I come from.

I have with me today the Director of our Western Region who——

Ms. CUBIN. They cannot hear. Can you get the microphone a little closer?

Mr. ACORD. We will move it.

Ms. CUBIN. Thank you.

Mr. ACORD. Let us see if that helps.

Ms. CUBIN. Can you hear now?

VOICE. No.

Ms. CUBIN. I wonder if that is working.

Mr. ACORD. I do not think this one is working. It does not seem to be.

Ms. CUBIN. It does not seem to be.

Mr. MICHELI. Here, use mine.

Mr. ACORD. How is that?

VOICE. That is better.

Mr. ACORD. I have with me today, Mike Worthen, who is the Director of the Western Region that covers the 17 western states, Alaska and Hawaii. I have Rick Phillips, who is the State Director for Wyoming for the Federal Animal Damage Control Program and Guy Connolly who is with the Predator Research Section of the Denver Wildlife Research Center.

First of all, I want to applaud you for having this hearing here in Wyoming. I think the closer you get to the people, the closer you get to the issues and the more your problems will be defined. I think the solutions also will be more practical and more usable perhaps.

Let me begin with some background on the Animal Damage Control Program. Our mission is to provide Federal leadership in resolving wildlife damage problems. You know, wildlife, which includes predatory species such as wolves, coyotes, grizzly bears, eagles, are all managed for the benefit of the public. They are publicly owned and with that public ownership comes some responsibility. They are managed for abundance and diversity, but quite often one of the bigger problems that we have is wildlife damage and that is often forgotten in that management equation. Private landowners, farmers and ranchers provide most of the habitat for wildlife in this country and they do it for free. The only thing that they

ask in return is some help with solving the wildlife damage problem.

We had Utah State University do a public attitude survey for us some time back—last year, as a matter of fact—asking about the public's attitude toward wildlife damage management and we were surprised to learn that there is a great deal of public support for the state and Federal Government to provide programs of managing wildlife damage. We think the public has both an ownership role as well as a responsibility role here.

I am sure you are going to hear a lot of testimony today dealing with trying to quantify the losses and Ron has alluded to that. But just one large statistic that you probably will not hear is that last year we did a nationwide survey of agricultural producers with the National Ag Statistics Service and that survey indicated that about 60 percent of the agricultural producers in this country have experienced wildlife damage losses and that the dollar loss is up to about $611 million. That is an increase of five percent in the number experiencing damage, as well as about a $150 million increase over three years ago when we did an earlier survey.

Just a little bit about our program. We are a cooperative program. We have two regions, one in the eastern United States and one in the west. We fund programs through cooperative cost share arrangements with both Federal dollars and with the states. We have almost $16 million that comes into the Western Region for animal damage control. Almost a million dollars of that, $970,000 to be exact, comes to Wyoming. That is matched by another $427,000 of funds that come mostly from the producers through a head tax. Producers are paying for that part of the program. We have cooperative programs in Wyoming with 17 out of the 23 counties. We have a good track record with the cooperation that we have in the counties and that is how we operate our program here in Wyoming, on a county-by-county basis.

One of the things that I think is important to recognize is the appreciation that people have for the service that we provide. We are big into trying to find out what people think about the service that we do provide and we have done some surveys of people that we have provided service to. And these numbers are rather impressive. You would think they would come from somewhere other than a Federal agency. Ninety-five percent of those people that we surveyed indicated that our people knew what to do to solve their wildlife damage problems. Ninety-seven percent said that our service was useful. Ninety-four percent believe that their losses would have increased had it not been for our service and 98 percent thought that the Animal Damage Control Program employees were pleasant to work with. In this day of government cynicism and those kind of problems, any Fortune 500 company would be glad to have numbers like that. And to think that they come from the Federal Government tells you that people appreciate what we do.

Just let me conclude my oral testimony with some comments about our research center. We have the world's only wildlife damage research center. It is located in Denver, Colorado, currently. We are building a new facility on the campus of Colorado State University in Fort Collins—and we expect to be moving there within the next year or so. But our center is devoted entirely to devel-

oping scientific information about predators and about wildlife damage. It is developing new methods of control and trying to improve the existing methods that we have. Frankly, the future of the livestock industry is dependent to a great extent on the efforts of our research center and others who are involved in this kind of research in developing methods of control. We hope that we are up to that challenge and we hope that we will have the support of both the industry and the Congress and others as we begin the development of many new methods that will see the livestock industry through the future.

With that, I conclude my oral comments and I would be happy to answer any questions that you have this morning, Mr. Chairman.

[The statement of Mr. Acord may be found at end of hearing.]

Mr. SAXTON. Very good. We are going to hear from Gary Shorma first and then we will be back with some questions.

Gary is from the Wyoming Game and Fish Department. So, Mr. Shorma, if you would like to share your thoughts with us at this point.

STATEMENT OF GARY SHORMA, REGIONAL WILDLIFE SUPERVISOR, WYOMING GAME AND FISH DEPARTMENT

Mr. SHORMA. Mr. Chairman, Congresswoman Cubin, ladies and gentlemen.

The Wyoming Game and Fish Department has had a lot of experience and spent a lot of time and money controlling depredation of bears and mountain lions. We have discovered that even those people who dislike killing animals support control of animals causing depredation problems. We have found that merely moving problem animals will not solve depredation problems and inevitably offending animals must be killed, especially if they become habituated to killing livestock or eating human foods. Their removal generally enhances the acceptance of non-depredating bears and lions.

We are currently experiencing low numbers of antelope and deer, and at such times public concern over predators reaches a high point. We recently participated on a predator management task force to try to deal with this issue. The task force was disbanded in frustration, so we wish your committee well on dealing with this controversial topic.

Our observations on predator control include the following: Even some of the most hardcore proponents of predator control recognize: (a) that control is impossible; (b) the public hates the word control; (c) management is a better term but management may be difficult, expensive or both.

Predators are taking livestock, particularly sheep, and in some places, they are taking significant numbers of sheep. We have had complaints from many parts of Wyoming about impacts of fish-eating birds on fish populations. Predators also take significant numbers of wildlife. It is what they do for a living.

Massive generalized predator control is expensive, ineffective and offensive to the general public, since they often view such control as extermination. Control of specific animals causing the problem

is accepted by the general public. This type of control targets problem animals or pairs of animals.

To control or manage predators, you need an estimate of the number of predators; an effective methods of killing predators; a way to measure loss of livestock; a way to show predators have declined as a result of predator control and a way to show losses of livestock have declined as a result of predator control. Unfortunately, there is not a good way to estimate numbers of predators. As a result, we count dead predators, but we have no way of knowing how that has affected the population of predators. When we kill predators year after year and there is no decline in livestock losses, many people argue control is having no effect and money is being wasted.

Coyotes, the animals currently at the top of the list of offending predators have what is called compensatory reproduction. This means elimination of some coyotes competing for food results in greater survival of pups and you end up with the same number of coyotes. There is no question that 100 years of predator control has produced a smarter, better adapted coyote. This has made control of livestock depredation much more difficult.

Many of the tools for killing predators have been taken away. Fur prices, due to pressure from animal rights groups, are very low. So the people who used to shoot predators to get furs to sell have given up. The American public does not like widespread use of poisons, so compound 1080 has been banned. M–44s, or cyanide guns are seeing more use. Toxic collars, which take the animal actually attacking a sheep, are reasonably effective, but for fear that one might fall off, EPA and the U.S. Fish and Wildlife Service have restricted their use. And finally, aerial hunting is reasonably effective but expensive and is generally not cost effective given current budgets.

An effective predator control program should target offending animals and reduce their predation on livestock. There should be some cause and effect; that is, increasing removal of predators should decrease losses of livestock. If this does not happen, the program is ineffective.

Cost should be considered. We have quite often expressed concern about cost effectiveness of predator control. Using a wildlife example, one state in the West controls coyotes to increase survival of antelope fawns. It costs $25,000 to control enough coyotes to raise the doe-fawn ratio from five fawns per 100 does to 12 fawns per 100 does in a herd of approximately 1000 antelope. This produced about 40 more fawns in that herd of 1000, half of which might be bucks. Of those 20 bucks, hunters might take one per year since the herd is only hunted lightly. $25,000 is a lot of money to spend to produce one antelope per harvest. We need similar figures on any predator control program to decide whether it is cost effective. While this example may seem extreme, it does illustrate the problem with costs and benefits using current techniques.

Where predator control is done to benefit wildlife, we need to evaluate that control to be certain that wildlife benefits are produced. If control is done to increase production of fawns, but there is no such increase, control should be stopped. Where we cannot

hunt or control big game populations by hunting, predator control is unnecessary.

Timing of control is important. Predators should be removed when their predator numbers are low to prevent large increases in numbers and both increased cost and decreased ability to control populations.

Wildlife belongs to all of the public, not just the hunters and the anglers. If wildlife is causing a problem and the public feels that the numbers of these animals should be controlled, all of the public should pay for that, not just hunters and anglers.

Thank you for the opportunity to share our views with you. We hope you are successful in identifying common ground and cost-effective solutions.

Mr. SAXTON. Thank you very much, Mr. Shorma. We are going to explore some of the things that you have mentioned in your testimony through some dialog here.

Barbara, why do you not begin by asking whatever questions that you may think are appropriate at this time.

Ms. CUBIN. Thank you.

Since Gary just finished speaking, I will ask him first. You are the Regional Wildlife Supervisor for the Wyoming Game and Fish Department, right, or one of them?

Mr. SHORMA. Yes.

Ms. CUBIN. From your testimony, it was never clear to me whether or not you think predation on wildlife is a problem. In fact, your statement was if wildlife is causing a problem, then the entire public should pay for it, not just a few. Do you think it is causing a problem to wildlife?

Mr. SHORMA. In some areas it definitely is and it, again, will depend on the population figures that you are dealing with.

Ms. CUBIN. And yet you said that you did not have population numbers?

Mr. SHORMA. I am talking about the prey species. The game animals that we are talking about.

Ms. CUBIN. Oh, OK. We talked—or one of my staff talked to a fellow at the Game and Fish and he said that the Game and Fish does not keep statistics on losses of wildlife due to predation because they cannot confirm the losses due to a particular predator. But it is my understanding that when the ADC goes out to check a possible kill, that the wildlife biologist must confirm that there was a kill and they also identify what predator it was. So, I am wondering why is it that the Game and Fish thinks that they cannot identify the offending predator but the wildlife biologist for ADC can?

Mr. SHORMA. Generally, the species that we are dealing with on identification or verification are those animals that are the result of depredation by trophy game animals, that being black bear, grizzly bear or mountain lions. One of the things that contributes to being able to identify is the timeliness on reporting. If you can find something that is relatively fresh, your chances are greatly enhanced to being able to determine the cause of death. Many times when we find animals, it has been some time since they have been killed and as time increases, your chances of making that determination decreases.

Ms. CUBIN. Well, I can understand that, but you know, you have people all over the state. It just does not seem like that is an insurmountable problem. So, I am wondering if the will is there actually to try to identify whether or not predation is a problem that is widespread or whether the will may not be there to try to determine that, due to possibly political reasons.

Mr. SHORMA. No, I do not think that is the case at all. If we are given the opportunity to make that determination, we certainly do.

Mr. SAXTON. On page 2 of your written statement, you refer to an antelope study that was done in another state.

Mr. SHORMA. Right.

Ms. CUBIN. What state was that?

Mr. SHORMA. Arizona.

Ms. CUBIN. OK. And would you provide us a copy of that?

Mr. SHORMA. I can, yes.

Ms. CUBIN. Would you please? That would be great. Are you aware that there are other studies that indicate more dramatic increases in fawn survival than the study that you referred to? There are quite a few, I think.

Mr. SHORMA. There may be some. I am not familiar with the exact numbers on those.

Ms. CUBIN. We can probably provide those to you, too, because I think the exchange of information is something that can help everyone when we are trying to solve this problem, or at least what I perceive to be a problem. I do not want to take a lot of time because I have questions for the other two, also.

Recently the hunting licenses were up—the fee for the hunting licenses were up—and we were also told when we called the Game and Fish that they were not increased due to losses by predators and that that had absolutely nothing to do with the increase in fees. Well, it is my understanding that the money that is generated mostly to the Game and Fish comes from licenses, and if the harvest were about the same as they have been in the past, why was there a need to increase the fees because from what I hear from hunters—and I hear a lot from hunters because my family is a hunting family and we know lots of people and they say the herds are down, especially deer in the western part of the state. I mean, is that a true statement? It is hard for me to believe that the lower numbers of herds had nothing to do with the increase in fees.

Mr. SHORMA. I hear the same thing. I am from this part of the state, so I cannot speak for the exact conditions that exist elsewhere. But winter conditions, low fawn survival and a multitude of things have contributed to a decreased and actually depressed population numbers. And our permits are obviously set based on population objectives and where we are at with those populations. The fees themselves were set in order to meet current maintenance and operation expenditures within the budget. As we all know, one of the things that cut into that is inflation and roughly $1 million a year is what we feel inflation is costing our particular budget.

The prices of licenses, again, were geared more toward the cost of doing business rather than the increase or decrease of the population. Obviously——

Ms. CUBIN. But you admit there is a decrease in the game population?

Mr. SHORMA. In certain parts of the state.

Ms. CUBIN. But you say that it does not have anything to do with the fee increase?

Mr. SHORMA. One of the things that did have to do with the fee increase was that a result of decreased revenues, obviously the reserves were depleted at a higher rate than would be normal.

Ms. CUBIN. So the answer would be yes, then?

Mr. SHORMA. In a sense, yes.

Ms. CUBIN. OK. Thank you. Can you tell the Committee something about—no, no, I am sorry. I am finished. Thank you.

I want to talk to Bobby Acord for a minute. Can you tell the Committee something about the research that is done in Denver. What have you come up with so far and how long have you been in operation? I think maybe you said that but I do not recall.

Mr. ACORD. Well, the Animal Damage Control Program has been around for many years and we have had the Research Center in Denver operational since back, I think the early 1950's. We have spent a great deal of time and effort on predator control research. We have invested some effort in research on guarding animals and——

Ms. CUBIN. What have you come up with?

Mr. ACORD. Well, at this point, I think we have proven the effectiveness of guarding dogs under limited circumstances. We have come up with an electronic guard which is a siren-strobe device that has limited effectiveness in some circumstances. One of the current efforts we are undertaking is to look at the sterilization of coyotes to determine if we can minimize their predatory behavior through, essentially, birth control. And one of the things that we are currently looking at is the behavior of some surgically sterilized animals at our research facility in Logan, Utah. You know, what impact does sterilization have on their behavior? There is no need for us to spend a lot of time and effort trying to perfect a reproductive inhibitor that we can administer through some bait or something only to find out that it does not have the desired impact. So, we are trying to learn right up front what kind of impact that that would have.

Ms. CUBIN. Well, I appreciate that. I want you to know at the onset that I favor the ADC program, although, I am not sure that it should not be delegated to the states if they wish to take it over. I am a scientist. I am a chemist and if I had been working for 46 years, from 1950 to 1996, and I could not come up with any more than the sound and the light and the—I cannot remember——

Mr. SAXTON. The guard dogs.

Ms. CUBIN. Oh, and the guard dogs, I would not be continuing to get money for research.

Mr. ACORD. Well, neither would we, Ms. Cubin, if that is all we had developed. I am talking about things that we have done recently in my response. We have developed the livestock protection collar. We have developed the M–44 sodium cyanide capsule. We have——

Ms. CUBIN. But none of those can be used.

Mr. ACORD. They are being used at this point. Now, there are some inhibitions through public policy. For instance, they cannot be used on Forest Service or BLM lands, but they are being used on

private lands and are being used quite extensively in the West. Although, the livestock protection collar less so than others.

Ms. CUBIN. I still—I have looked at the accomplishments of the Research Center and to think that we are building a new research center while we have universities all over the country—I am speaking as someone who is trying to balance the budget. We have land grant research—land grant universities all over the country studying the same kind of thing. I just, honestly, cannot think that we have gotten the bang for the buck out of the ADC research that we should have. But then, of course, that is my opinion only.

I am just curious, how much is appropriated—you know, we have two different sections, the East and the West. How much is appropriated to the East?

Mr. ACORD. The total appropriation is about $26.5 million for the operational program. We have about five million of that going to the eastern United States and the other comes to the west. Wyoming gets about a million of that. There are a number of other things that are supported out of that budget. There are a number of Congressional directives that tell us to do specific things for the Berryman Institute at Utah State University—the Wildlife Damage Management Center there. There are other activities that are supported out of those funds as well.

Ms. CUBIN. Thank you. Now, one last thing. This is kind of a local issue, although it certainly does not have to stay local. There is a rabid skunk problem that is pretty big right here in Campbell County and I have had a lot of constituents call and inform me of this problem. I understand that 30 people had to be treated after being bitten either by a skunk or another animal that was infected by a skunk, such as a horse or a calf. I also understand that six horses had to be put down after being bitten by rabid skunks and this year there have already been three people bitten and two horses have been put down and really the season has not even begun.

One veterinarian has predicted that this year will probably be the worst ever because we had such a mild winter. And the same veterinarian said that the rabid skunks bite other skunks while they are still in the den during hibernation and then when they come out, they are all rabid. I would like to encourage you or ask you respectfully to try to coordinate some research with local people, with other agencies to get something done here. That, I realize is about a two-year down-the-road problem or solution. In the meantime, I have written to Carol Browner with the EPA and asked—I guess, I said that she give us a special use permit to use strychnine because this could very well be a very serious problem. A limited permit for this area. And, of course, we will be working with Ron Micheli trying to get something done on that. But we would appreciate any input and any help, particularly focused at research, that you could help us with.

Mr. ACORD. I understand there are two counties here with a rabies problem at this point. We will try to work with the Predatory Animal Board in both of those counties to try to develop a solution. I think the methods are there probably to deal with the problem. At this point, I am not sure that we know the magnitude of the rabies infection.

Ms. CUBIN. Yeah. I do not think we will until the problem is upon us, because calving season goes on and the skunks come out of hibernation and they are rabid. I can foresee the possibility of people not even knowing they have been infected while they are tending to their calves and their mothers. We will not know until the problem is upon us. That is why I think that we have to have something in place to deal with it immediately. I mean, the first casualty from this will really be unnecessary and should really cause an outcry. So, I hope we can work on that.

Mr. ACORD. You will have our cooperation.

Ms. CUBIN. Thank you.

Mr. Micheli, I just have a brief question for you. I agree that the states can better handle the problems that exist and the situations that exist in their states than the Federal Government can. The thing that I see that worries me somewhat is that there is always strings attached of some kind. Now, what sort of oversight do you think would be acceptable from the Federal Government, if any, and what agency ought that to be in, or do you even know at this point?

Mr. MICHELI. Well, obviously, those are things that we would have to work out. But, I would suggest that there are parallels and it is not certainly unprecedented that we have those sort of arrangements. For example, with our highway funds that are administered by Congress, they are given essentially in a block grant. Our Wyoming Highway Department administers those funds. They build highways. They take that block grant and they administer the program. We are very proud of the Wyoming Highway Department and the things that they do.

Ms. CUBIN. We have the best highways in the country.

Mr. MICHELI. That is right. We do not have to do NEPA compliance when we build a highway across Wyoming except when it does go across Federal ground. We are able to administer those programs essentially in the best judgment of the local governing body. Again, we do some of that to some extent with some of the education funds and some of the block grant programs that you people are involved in very heavily in Congress.

So, I do not think—I do not know that I can outline—I can tell you how I would like it to be but obviously there is going to be some negotiations. Lest there be concern though that it is just a blanket permission to do whatever you want with these funds, remember than 50 percent of Wyoming still is owned by the Federal Government and that we have to work with those Federal agencies to administer any kind of predator control on those grounds. Again, I would reiterate that we are not interested in administering the Federal program if we do not have the latitudes and flexibility in administering those funds. Frankly, some of that flexibility has to be extended also to the BLM and Forest Service because much of the flexibility that we are asking for has to be available on Federal property.

Mr. Acord mentioned the predator control—I am sorry, the predator collar, the livestock collar. It is a 1080 collar that is—Mr. Shorma mentioned about this—the specific target animal, the killer animal. Well there is nothing more specific than the 1080 collar strapped to the neck of a sheep and kills a coyote when the coyote

is killing the sheep. Currently, we cannot use the predator control—the predator collar on Federal ground. We just need that latitude. Frankly, we did not lease a collar last year because virtually every sheep producer in the state of Wyoming goes on some kind of Federal property during the course of a year. Plus, we have further restrictions that they can only be put on a certain number of sheep. We cannot put it on each ewe. So, we have just got to have more flexibility. We think we can do that but we have got to have some relaxation of the rules and have some confidence that the states will administer the program as it would best meet the individual needs of the states.

Ms. CUBIN. Thank you.

Mr. Chairman, I know I have gone over my time. One last quick question for Mr. Micheli.

What about research? Where do you think that research should occur? Should there be more coordination? Should we set goals? Do you have any opinion? And if you do not, that is fine. I mean, I know this is coming out of the—off the wall.

Mr. MICHELI. Well, again, as you mentioned, we have a land grant university in this state. We would appreciate any effort that the Congress could make to direct the research in that direction. Again, it is a philosophical thing. Those people who are in those programs would understand the individual needs of the states, whether it be coyote, whether it be mountain lion or whatever. I am not here to quarrel with the ADC. They are doing the best job they can under the circumstances.

Ms. CUBIN. Thank you.

Mr. SAXTON. Thank you very much. In Congress, I wear a couple of hats. One is to be Chairman of this Subcommittee. The other interesting thing that I do is that I am Vice Chairman of the Joint Economic Committee. So, Mr. Micheli, if I can just ask you to take off your hat from the Department of Agriculture and put back on your hat as the representative of the Governor. Let me ask you about your economy here. In terms of industries, what is the biggest segment of the economy and where do you go after the biggest? You know, what is important?

Mr. MICHELI. Sure. Our leading industry in the state of Wyoming is our mineral industry. The minerals industry at one time generated approximately 80 percent of the total revenues, tax revenues to the state of Wyoming. It is now approaching closer to 50 percent because of the downturn of the minerals economy in the state.

Our second leading industry in the state of Wyoming is tourism and our third leading industry is agriculture. Obviously, we are dealing here with two of those industries with this hearing. So it has a tremendous impact on our state.

Mr. SAXTON. Now is it true that after you get past the very important mineral industry that tourism and agriculture are both tied very closely to the issue that we are talking about here today, namely predator control?

Mr. MICHELI. Absolutely.

Mr. SAXTON. And what percentage of the economy do segments two and three of the economy provide for the state? Do you know offhand?

Mr. MICHELI. I could not give you that information off the top of my head. I can tell you that the agriculture industry generates about a billion dollars a year in gross product. I'm not sure if I could quantify the tourist industry.

Mr. SAXTON. Mr. Shorma, when I was here last fall antelope hunting, I ran across person after person, both before, during and after the hunting experience that we had which was wonderful, by the way, who told me that the antelope population used to be multi-times as large as it is now. Does that sound right to you?

Mr. SHORMA. In some areas that could be possible. We have a system whereby we manage by objective and those objectives are determined based on public input; input from landowners obviously and input from the Federal land agencies that are in charge of managing those public lands. In our area, most of our populations are very close to those objective targets that we have set. That will vary based on recruitment and recruitment being a function of weather, predators or whatever. A multitude of things.

Mr. SAXTON. Would you say that in those parts of the state where the antelope population is down—I obviously would relate this to other species as well. Is predation a major issue in terms of what has caused the decrease in population in those areas?

Mr. SHORMA. Not having areas within my region that are down at those levels that would seem significant in terms of the public, I cannot really comment on that. I know that predation plays a role in our game herds in this area. But when game herds are high, the effects are smaller than obviously when they are depressed and they become a higher percentage of those smaller numbers.

Mr. SAXTON. Mr. Micheli, back to your agricultural hat. You mentioned the effect on the sheep ranching business of predation. You mentioned that your numbers indicate that as much as 25 percent of the young sheep are taken each year by predators?

Mr. MICHELI. That is correct.

Mr. SAXTON. Does that relate to the cattle industry, also? Do you have a percentage of take for young cattle?

Mr. MICHELI. I do not have the statistics with me. We are not doing as good a job, frankly, in collecting the numbers off of cattle that we do with sheep. But let me just tell you that we are seeing increasingly as the sheep numbers decrease in Wyoming, that we are, in fact, having predation on young born calves from coyotes and particularly from grizzly bears. I am not aware of statistics that are available for livestock producers, but if they are, I will be glad to furnish those to you.

Mr. SAXTON. Do you believe that there is a significant effect because of predation on the ability to raise cattle?

Mr. MICHELI. There is a definite effect in some areas of the state. Depending on your definition of significant, I think it is becoming an increasingly serious problem in the cattle industry.

Mr. SAXTON. So, if I go back to my first question and say that the second and third largest industries in the state are based on wildlife and agricultural pursuits, it would seem to me that something ought to be done to get a better handle on predation. And your suggestion apparently is that the state could do a better job than the current situation, which is essentially a partnership between the state and Federal Government?

Mr. MICHELI. That is correct. One of the things that time would not allow me to recognize, and you should recognize, is that we do have in place predator boards in each county who have the opportunity to place a millage on their livestock. And we raise almost exactly—very close to the same amount of money locally from our predator boards—from the predator fee that is paid by the livestock producers for predator control at the local level. So, while I represented to you that we have just a little less than a million dollars coming from the Animal Damage Control, you should also recognize that we have with that a million dollars that is being raised locally by the livestock producers for predator control, and it is a partnership.

Mr. SAXTON. Mr. Acord, can you help me out with the policies that differ with regard to predator control on Federal lands as compared to privately owned lands?

Mr. ACORD. Yes, sir.

For the most part, the land managing agencies, the Forest Service and the Bureau of Land Management, have the responsibility for setting their own polices. Generally, we have had good cooperation in working with those two agencies in the last couple of years. Earlier, we had problems with respect to compliance with the National Environmental Policy Act. They were supposed to be doing environmental assessments for predator control on lands that they manage. They had not been able to accomplish that in every case and in some cases, we were shut down. They have specific policies with respect to the use of pesticides on public lands. We are now in a negotiation with the Bureau of Land Management where they will not require us to have a pesticide use permit to use pesticides on Bureau of Land Management land. That would at least free us to use M–44s on their lands. I hope that we can use the livestock protection collar on their lands as well.

Since that time, they have also through a memorandum of understanding delegated to us the responsibility for doing environmental assessments on their land. I believe that we have been able to do that and we are successfully working everywhere that we need to work.

But many of the restrictions that we have heard about here today are the result of label restrictions from the Environmental Protection Agency. Like the M–44s have 25 use restrictions that are placed on them by the Environmental Protection Agency, and that is not likely to change, regardless of who uses those products. The same way with the livestock protection collar. There are some very specific constraints put on by the Environmental Protection Agency. And then when the Federal agencies or the land managing agencies, in addition to that, place additional restrictions, it makes it very difficult to use them. But, I think we are perhaps out of the woods, so to speak, with the Bureau of Land Management and hopefully, we will make some similar progress with the Forest Service.

Mr. SAXTON. Mr. Shorma, with regard to Federal lands, does your department administer wild animal programs on Federal lands as well as on private lands?

Mr. SHORMA. As far as depredation losses?

Mr. SAXTON. Yes, sir.

Mr. SHORMA. Yes. Damage done by trophy game animals, those which include black bear, grizzly bear and mountain lions are investigated and action taken on private and on public lands.

Mr. SAXTON. So you—both on private and public lands, you see it as the responsibility of the state of Wyoming—specifically your department—to involve yourselves as a department in this predation problem?

Mr. SHORMA. Well, we as a department are mandated by a state statute to compensate for losses sustained by trophy game animals. So animals that are determined to have been killed by black bear, grizzly bear and mountain lions are compensated by the state of Wyoming.

Mr. SAXTON. Do you believe it is your responsibility or your department's responsibility to help in the predator control aspect of this issue?

Mr. SHORMA. State statute dictates that we do.

Mr. SAXTON. And do you?

Mr. SHORMA. We do.

Mr. SAXTON. I thought you probably were going to say that.

[Laughter.]

Mr. SAXTON. Thank you.

I have no further questions at this time.

Ms. CUBIN. I have nothing further.

Mr. SAXTON. We want to thank you very much for being with us this morning and thank you for your articulate testimony.

We are going to move along then to panel two. Thank you for being so patient. You have been with us for an hour and 10 minutes. It has been pointed out that there may be some additional questions which we may want to submit to you in writing. So, we will hold the record open for those answers.

We are going to move to the second panel now which consists of Mr. Truman Julian, who is the President of the Wyoming Wool Growers Association; Ms. Cindy Garretson-Weibel, Executive Director of the Wyoming Stockgrowers Association; Larry Bourret, Executive Vice President of the Wyoming Farm Bureau; Terry Schramm, a rancher from Jackson, Wyoming; Mr. Bob Wenande from the Black Hills Regional Multiple Use Coalition; and Mr. Scott Zimmerman, who is the Field Representative from the Rocky Mountain Farmers Association. So welcome. You all got up here in a hurry. Thank you very much.

We are going to have those little lights flashing there. And since this is a rather large panel, we would ask you to stay as close to your five minutes as you possibly can.

Mr. Julian, if you would like to begin at this time.

STATEMENTS OF TRUMAN JULIAN, PRESIDENT, WYOMING WOOL GROWERS ASSOCIATION

Mr. JULIAN. Chairman Saxton and Congresswoman Cubin, I am Truman Julian, President of the Wyoming Woolgrowers Association.

Ms. CUBIN. They cannot hear you, Truman.

Mr. JULIAN. Maybe you should stick this in your nose.

Ms. CUBIN. Right.

[Laughter.]

Ms. CUBIN. Pin it on your lip.

[Laughter.]

Mr. JULIAN. I will pin it to my mustache. This is not on my time? Since January of—am I coming through now?

VOICE. We can hear you now.

Mr. JULIAN. Since January of 1993, the sheep industry in Wyoming has lost over 500 active lamb and wool producers with a corresponding reduction of over 255,000 head of producing ewes. Nationally, we lost approximately 2.5 million head of sheep, or 22 percent from 1990 to 1995. What the loss of 255,000 head of producing animals in the state of Wyoming means to this state and to the American economy is a loss of $153 million in economic activity or over 7900 jobs. You may notice that the decline in both the Wyoming sheep and producer numbers coincides with the passage of the act by Congress to eliminate the wool incentive program. This is not a coincidence. I am here to tell you that the action Congress took in 1993 to eliminate the 50-year old Wool Program is not the only reason we have seen 33 percent of our sheep and 32 percent of our production base leave the state.

Since the fall of 1993, the Wyoming Executive Board of the Wyoming Wool Growers Association has conducted a series of town meetings throughout the state. Guess what the sheep producers in Wyoming have indicated is the number one problem that they have faced over the past three years? Predators. According to the Wyoming Agriculture Statistics Service, predators have cost sheep producers in Wyoming almost $4 million annually over the past five years. This cost, plus the loss of the Wool Act, which accounts for approximately 24 percent of the sheep producers income, have brought about the decline of the sheep industry in Wyoming and the West.

On our ranch, predators cost us directly over $30,000 a year. Losses have ranged from a high of 22 percent to a low of 10 percent, averaging about 15 percent yearly. The wool incentive amounted to 26 percent of our annual income. The combined values of these two losses amount to about $180,000 per year, again depending on the prices of lamb and wool.

On our operation, coyotes are the number one predator, followed by fox, black bear, ravens, golden eagles, mountain lions and an occasional loss from badger and bobcats. Soon, perhaps as early as this summer, I will be facing the wolf.

Let me assure you, Chairman Saxton, that despite what some environmental and animal rights activist groups would have you believe, we are not setting on our backsides complaining about predators and doing nothing about the problem ourselves. Myself, as well as almost all other sheep producers in Wyoming have tried everything available to reduce predatory losses. We have at one time or another used fire, fire crackers, repellents, predator ear tags, scare devices, sterilization, herding sheep, sleeping with sheep, trapping, flying, M–44s and guard dogs. Some of these tools were worthless and expensive while others were useful.

Last year, we spent over $5000 in predatory taxes, $4500 in aerial gunning, over $2000 for a private trapper and over $4500 for dog food and vet supplies. We furnished a horse for a trapper and provide horse feed and pasture. This adds up to approximately an-

other $20,000 per year, which takes my overall predatory cost to about $50,000 per year. It is added expenses such as these that are causing us to lose a wonderful industry in Wyoming and much of the West.

Let us go back to the wolf. As you are aware, wolves were introduced in Idaho and Wyoming in Yellowstone Park last winter. And as you have probably heard, they are not staying in the park. I would like to present to you some facts presented by Elaine Allestad in testimony given before the U.S. Senate Subcommittee on Park, Historic Preservation and Recreation in May of 1995.

The Eastern timber wolf recovery program has taken an enormous toll on the livestock industry and agriculture in general in northern Minnesota. According to USDA figures, there were 12,230 farms and 91,000 sheep in the Minnesota wolf range in 1979. By 1982, the number of farms in the Minnesota wolf range declined 41 percent to 7200 farms. By 1986, the sheep numbers in the northern Minnesota wolf range declined 82 percent to only 16,000 sheep. This decline in sheep numbers in the wolf range occurred while sheep numbers in the rest of the state increased.

In 1992, the United States Fish and Wildlife Service issued a report entitled "Trends and Management of Wolf/Livestock Conflict in Minnesota". Most disturbing is the report's conclusion that because factors in Minnesota are different than in the West, the West can expect even heavier livestock losses than those expected in Minnesota.

In a recent conversation with the U.S. Fish and Wildlife concerning wolves, I asked whether our existing predatory management program in livestock areas outside the Park would be affected if wolves decided to look for greener pastures. I was told by the U.S. Fish and Wildlife that if a wolf showed up outside the Park, for example, in my area, which is about 100 miles south of Yellowstone Park, that M–44's and snares would be definitely affected and probably leg-hold traps and possibly aerial hunting. Tell me, Committee members, what methods of management do we have left? What am I and other livestock operators to do but go out of business? Can we not learn something from Minnesota?

My grandfather immigrated from England and started our ranch in the 1880's. My children are the fourth generation of Julians engaged in the sheep ranching business in southwestern Wyoming. My father is still alive, so counting my two new grandchildren, we have got four generations on this old original ranch, living on there and making a living from it. It is my will and desire to have the Julian sheep ranch for another 116 years. The big question is, will the United States government allow us to survive?

Look at the grizzly bear in Wyoming. They have reached their population objective to be delisted. Have they? No.

I thank you. I see my time is up. I present my case to you. I would hope that you look at my entire written testimony and information that is presented there.

I feel bad that I think that we need things like this written in Endangered Species. I think the original intent and why they were founded was great. I feel now that there are government agencies that basically—and this administration as a whole—are beating up

citizens and people that are making a living, especially in these western states.

I thank you for your time and consideration. Thank you, Mr. Chairman, for coming to Wyoming.

[The statement of Mr. Julian may be found at end of hearing.]

Mr. SAXTON. Thank you for very compelling information and a very compelling statement.

Ms. Weibel.

STATEMENT OF CINDY GARRETSON-WEIBEL, EXECUTIVE DIRECTOR, WYOMING STOCKGROWERS ASSOCIATION

Ms. GARRETSON-WEIBEL. Mr. Saxton and Ms. Cubin, I appreciate the opportunity to testify before you today regarding predator control or the lack thereof. My name is Cindy Garretson-Weibel and I am the Executive Director for the Wyoming Stock Growers Association. We represent over 1600 ranching families in Wyoming.

As we begin our discussion today, I would like to explain that predatory animals, according to Wyoming statute, include the coyote, red fox, wolf, among others. My primary focus today will be on the coyote. However, bobcats, mountain lions, grizzly bear, black bears and even raptors cause depredation on livestock and other wildlife species. Some of these species are protected as threatened or endangered; thus, adding to the difficulty of providing an effective predator control program.

Though much of the predation by coyotes is on the domestic sheep population, predation on cattle is also common. If you have ever seen a fresh kill by predators on sheep, cattle or wildlife, you understand the emotional debate involved with predators. If you have not had the misfortune of witnessing such a gruesome act, I have attached to my comments an article entitled "How Coyotes Kill Sheep."

Today, I want to focus more on the common sense need for predator control rather than on emotion. The fact is that Wyoming sheep producers lost 56,000 sheep and lambs to predators in 1995 and coyotes were the main predator. And in 1991, over 1000 head of cattle—cows and calves were documented as killed by coyotes alone.

It is noteworthy to point out that the livestock producers receive no compensation for depredation of livestock caused by coyotes. In addition, as it has been mentioned earlier, ranchers in Wyoming pay for predator control. From July 1, 1994, through December 31st of 1995, livestock producers contributed approximately $900,000 to predator control through payment of mandatory predator fees collected. This predator control benefits the wildlife population as well as the livestock.

In addition to the loss of livestock to predators, our association is deeply concerned about the loss of wildlife to predators. Now with the introduction of the wolf into Yellowstone National Park, an even greater impact will be seen on the wildlife populations. Wyoming is well known for its pristine beauty and abundant wildlife and we want to see these healthy wildlife populations remain.

If the wildlife populations continue to decline, the state's wildlife agency could face a loss in revenue due to reduction in license allocation. In addition, in 1993, non-consumptive users—that is the

backpackers, photographers and such—they spent over $2 million throughout the state. If the wildlife populations continue to decline, the economy of the entire state will be affected.

What are the solutions? Before the predator problem can be adequately addressed, I believe the wildlife agencies must admit that a predator problem does exist. I believe that state wildlife agencies have soft-peddled the predator problem. In addition, more involvement and participation on the part of the Federal Government with the state is imperative to effectively control the predators. Research efforts need to be continued in order to develop management and control practices that are socially acceptable.

Predator control methods on Federal land are more restrictive than those on state and private land as has been previously mentioned. This makes it very difficult to tackle the predator problem as a whole. It is vitally important that further restrictions are not placed on our present control methods that we do have available. What we do not need are more burdensome rules and regulations. What we need is more common sense. However, I have not figured out how you really legislate that yet.

Mr. SAXTON. Neither have we.

[Laughter.]

Ms. GARRETSON-WEIBEL. What do ranchers want? We want protection from devastating predator losses and we want to maintain a healthy wildlife population. That is all we want and I am relatively certain that that is what others want as well. All we desire is to maintain our way of life and have a "home where the buffalo used to roam and the deer and the antelope play, where seldom is heard a discouraging word and the skies are not cloudy all day."

Thank you ladies and gentlemen for the opportunity to comment.

[The statement of Ms. Garretson-Weibel may be found at end of hearing.]

Mr. SAXTON. Thank you very much.

Mr. Bourret.

STATEMENT OF LARRY BOURRET, EXECUTIVE VICE PRESIDENT, WYOMING FARM BUREAU

Mr. BOURRET. I am Larry Bourret, Executive Vice President of the Wyoming Farm Bureau Federation in Laramie, Wyoming. We thank you for the opportunity to explain the problems with animal damage control.

Mr. SAXTON. Mr. Bourret, we need you to get the microphone a little bit closer, if you could.

Mr. BOURRET. OK.

Ms. CUBIN. Maybe that is one that does not work.

Mr. BOURRET. We welcome you here and we welcome the opportunity to explain the problems with animal damage control and propose solutions to this situation.

Predator management is not a new issue, nor is it merely a western issue. Predators were encountered by the early immigrants to the East Coast. The colony in Massachusetts enacted the first wolf bounty in what is now the United States 365 and one-half years ago yesterday, November 9, 1630. Two Fish and Wildlife Service biologists, Stanley Young and Edward Goldman, in a book The Wolves of North America, wrote, quote, "During the period from

early colonization of New England and the middle Atlantic states, scarcely more than a decade passed before the early settlers adopted the bounty system as their main recourse toward the stoppage of wolf depredations. Practically every settlement had some such scheme in effect, but wolf depredation seemed to have kept pace with the ever expanding livestock husbandry. With the closing of the 18th century, the wolf bounty plan was in effect in practically all of the colonial settlements. Up to the middle of the 19th century, Vermont still continued with a state bounty of $20 for the killing of each adult wolf and $10 for each suckling whelp." By this time, according to Thompson, wolves had been so reduced that, quote, "the amount paid annually for wolf certificates is usually from 1 to $200."

I would like to insert into the record some documents. One of them being a study that was done by the Fish and Wildlife Service, Predator Damage in the West. That indicates on page 34 some information, Chairman Saxton, about calf losses. And there is also information in there about a study that was done in Montana in 1975, 1976 and 1977, paid for by the Fish and Wildlife Service, in which they allowed losses to occur, reimbursed the rancher for the losses. The lamb losses got up as high as 28.8 percent. I think that would refute the allegation by some that there is no economic benefit to predator control. If you get those losses up that high, you are out of business in a big hurry.

In addition, I have got a copy of that study from the Cook Ranch in Montana.

I have another document relative to some things that occurred in 1971 and 1972. Wyoming was involved in this situation for years. Wyoming's first wolf bounty law was a territorial law in 1875. And over the years, trapping, shooting, denning, chemical toxicants and other methods have been used. In the early 1970's, environmental groups filed suit to halt the Federal Animal Damage Control Program. The government canceled the pesticide registrations in March of 1972 and told Wyoming citizens proposed amendments to FIFRA would provide a means to re-register 1080, strychnine and cyanide. Efforts to accomplish that have failed because the government failed to keep its word. The methods of control in 1972 are much the same as today. But additional restrictions have been imposed. In 1972, we were assured the government would provide new solutions through research. There has not been one new method developed through research that was not available in 1972.

The Federal Government relied on a report written in 1971, the Cain Report to cancel their registration for predator toxicants. That report recommended a concomitant compensatory Federal effort through increased aircraft hunting, an insurance program and an expansion of research on more effective and economical control methods. The Federal Government has failed to provide relief for these 24 years and the situation is worsening. Now, we are faced with a new set of problems in the form of wolf reintroduction and a new set of government restrictions on the Predator Control Program.

You heard Truman Julian and what he said the Fish and Wildlife Services told him. The EIS and the rules on the wolf introduc-

tion indicate that private property will not be affected by land use restrictions because of wolf recovery. Now, we would like the Committee to look into that matter and determine if the restrictions that are going to be placed on livestock producers in Wyoming as a result of the wolf introduction, through the use of restrictions to further hinder predator control, are a reality. And if they are a reality, why then did the government lie to us on these documents that I am looking at right here? The rules and the EIS.

We would also request that the Committee look into the Dingell-Johnson funds to reimburse livestock producers for their losses. Those Dingell-Johnson funds are supposed to be used for habitat and if livestock producers are providing habitat in the form of lambs and calves, then they should be reimbursed for those losses.

We thank you for the opportunity to comment.

[The statement of Mr. Bourret may be found at end of hearing.]

Mr. SAXTON. Thank you, Mr. Bourret.

We are going to leave that microphone down there. I think this will work much better. Mr. Schramm, would you like to proceed?

STATEMENT OF TERRY SCHRAMM, RANCHER, JACKSON, WYOMING

Mr. SCHRAMM. Sure. Thank you.

I am Terry Schramm and I have been a cowboy on the Blackrock Spread Creek allotment for 16 years. I work for Paul Walton and Gladys Moulton. They have been a responsible, legitimate user of this Forest Service allotment for over 75 years. In Teton County, 97 percent of the land over there is federally owned. So without that grazing allotment, we would not have a viable ranching operation, as private land is unavailable.

For the past three summers, our ranching operation has suffered substantial losses due to grizzly bear predation. We have had 52 confirmed bear kills. We came up 66 calves unaccounted for. We lost a total of 192 head of calves in the past three summers, which is about nine percent of our calf crop. Now historical losses used to run about two and three percent.

It is true we have been paid compensation by the Game and Fish, but we have had to fight for every penny that we have got out of those guys. They do not seem to be too interested in getting into a long, protracted compensation program over animals that they have very little management decisions. And compensation is easy, somebody could pay for dead livestock. But compensation is not the whole answer.

I am not sure that I have the verbal skills to explain the management problems that I have to suffer up there. When these bears are in there killing cattle every night, management is totally out of the question. My job up there is to nurture livestock, fix fences, shoe horses, pack salt and work with the land and wildlife agencies to ensure habitat protection, riparian improvement and resource management. Now my job has been reduced solely to chasing dead stock. I spend all of my time looking for dead critters, rather than taking care of the live ones, if I want to get paid any compensation whatsoever. And on an allotment of 88,000 acres of mountainous terrain, I will guarantee you that you cannot find—you could not put enough people out there to find every dead critter that these

predators have killed. So therefore, compensation just is out of the question. Nobody even calculates in the manhours. I put in thousands of manhours to try to find these. Granted, just being a cowboy, my time ain't worth a hell of a lot, but it has got to be worth something.

Since most of these predations occur at night, and considering the large expanse of terrain I have to cover, I can appreciate your 22-mile ride. I do that every day.

I cannot see.

Ms. CUBIN. Me either, Larry.

Mr. SCHRAMM. Nobody has taken into account that livestock have an aversion of being eaten alive by large predators.

[Laughter.]

Mr. SCHRAMM. And it is absolutely impossible for me to even keep these cattle on the allotment. Bears get in with them at night, these cattle are screaming, running back and forth. Nobody takes into account the weight loss, the stress related illnesses. These cattle are trying to pour out of there. They want to go home because they are not used to be treated like that. I spend the rest of the day pushing them back up over the hill and then I just go around and look and see where I can find a dead calf. It seems rather ridiculous to me.

Both of these ranches have been put into a conservation easement to ensure that they will be ranches forever.

There was one thing I noted you said, we have a little conflict between agriculture and tourism. But the two are actually closely connected in the state of Wyoming because people come here to see a different culture. I am here to fight for that culture. They spend more time taking pictures of me than they do of the grizzly bears that are killing my cattle, I can assure you.

[Laughter.]

Mr. SCHRAMM. A study was implemented when I started whining about excessive predation and a total of 15 grizzly bears, 25 black bears and two mountain lions have been caught on my allotment. So that is my commitment to preserving the species. I am not out here to eliminate them, but I want to see that we can survive, too. Now, I think the government is working more for the predator than it is for the people.

Just to summarize this thing, I would like to tell you a little story. It is about—back in the 1980's, an old sheep herder over in Island Park, he is out there tending his flock. Doing a job that is as old as civilized man. One night, a collared grizzly bear got into his flock and killed 30 of his sheep and scattered his flock all over the place and he went out and he shot the grizzly bear. He killed the bear. The next day, the feds show up and they say you are under arrest and he says, for what? I have always been an honest man. And they said, you killed a grizzly bear, and he looks at them in bewilderment and he says, but he killed my sheep. It is just as simple as that, we do not want to be a bunch of outlaws. So do not pass laws that we cannot live by. We just want to get along.

Thank you.

[Applause.]

[The statement of Mr. Schramm may be found at end of hearing.]

Mr. SAXTON. Thank you very much. We appreciate that very much and I would like to spend one of those days with you. That would be a wonderful experience for me. I will do that someday if I get a chance.

Mr. SCHRAMM. Well, it is a thrilling experience to wade down into the willows and find a carcass that a grizzly bear is laying on so you can get paid 326 bucks for it.

[Laughter.]

Mr. SAXTON. Mr. Wenande.

STATEMENT OF ROBERT WENANDE, BLACK HILLS REGIONAL MULTIPLE USE COALITION

Mr. WENANDE. Thank you. I am Robert Wenande, a rancher from about 60 miles north of Gillette here, a little town they call Oshoto. I had a lot of stuff written down here that I am involved in and it looks kind of like my obituary, so I will skip that part.

[Laughter.]

Mr. WENANDE. I have been in the ranching business for over 50 years and during that time, I have witnessed many declines in the wildlife population due to predators. I have also seen many unfavorable changes in the livestock industry due to the increase in predator population.

In the 1930's and early 1940's, there were very few deer and antelope in Crook County and my part of Campbell County, basically, due to the fact that the coyote population was very high. As a result of that imbalance, the government trappers started using a compound called 1080—it was a very selective poison—to control predator population. In a matter of a few years deer population flourished, so did the antelope. In fact, the Wyoming Game and Fish Commission started issuing multiple licenses to control wildlife numbers.

In the 1950's, I think it was, 1080 was banned and the coyote population exploded again. As a result of this population explosion, the game animals numbers began to decline. Trappers and aerial hunters and spring denning were used to control predators. These methods were not nearly as effective as, or efficient as, the 1080 and our game numbers continued to decline.

Out on our ranch, we allow deer and antelope hunting. We limit the number of hunters and the number of animals taken in order to kind of maintain a balance of population of game animals there on the ranch. Despite our efforts, predator numbers continue to increase which in turn puts a lot of pressure on the wildlife causing the deer and the antelope numbers on the ranch to be decrease each year. Very few fawns, antelope and mostly in the deer population make it through the first winter. That is a bad time for the coyotes—it is an easy time for the coyotes but it is real bad for the fawns.

Predators not only affect the deer and antelope, but also the bird population. When I was growing up, there were prairie chickens and sage grouse in unlimited numbers. During the 1950's, the red fox moved into our country. The little red fox is a very efficient hunter and the prairie chickens and the grouse nest on the ground making them an easy prey for the predators. Today, you hardly ever see a prairie chicken and very few grouse.

We had a lot of turkeys. The Black Hills up there were probably noted for some of the best turkey hunting in the state of Wyoming. Due to, I would say, the fox—and I did not bring into my testimony here the eagle. I thought it was a too sensitive subject to bring up. But, I would like to comment a little bit on the side about the eagles and what they do to the wildlife and also the livestock out there. The wild turkey population in that Black Hills area is practically gone and this is due mostly to the eagle population. I have seen a bald eagle—or the golden eagle, I mean, keep a bunch of turkeys in a willow patch all day long. They could not go out and graze because they were going to get slaughtered. Of course, a turkey does not graze at night. Eventually the turkey is forced out by starvation and the eagles are waiting for him to come out. We just do not have hardly any turkeys left.

I am going to get away from the wildlife for a little bit and talk to you about—we run sheep and cattle on the ranch out there and each typical year, we expect to lose 125 to 200 lambs to coyotes and fox. In a way, you cannot blame the coyotes and the fox that much. They are over-populated. There is not a rabbit left in that country and they have got to eat something because they are just so many of them. They have eaten up their own supply of food, so naturally they have turned to the easy prey, which is lambs and out in our country, some calves.

We have experienced—you know, the ranching experience has been pretty depressed the last several years. And a lot of the reason is due, out there anyway, to the predators we have to put up with. It is kind of unfortunate. Many people have the impression that the livestock ranchers want to completely exterminate the coyote and the fox and that is not the truth. The ranchers are probably one of the strongest advocates of all your wildlife species. Our main desire, however, is to keep the wildlife population in balance.

There is a fallacy also that ranchers do not do anything to protect themselves from predators. The Predator Control Board in Crook County assesses the monetary limit on their own livestock that they use in their predatory fund. Like Mr.—I am having trouble with this thing.

Mr. SAXTON. I think if you hold it more straight like this, you might experience a little better——

Mr. WENANDE. Spit right into it.

Mr. SAXTON. Spit right into it.

[Laughter.]

Mr. WENANDE. OK, sir.

It started as a fallacy that the ranchers do not do anything but whine. They do not do anything to protect themselves. But like Mr. Julian said, on our ranch, we independently hire a professional trapper every fall for six weeks. In the fall of 1995 that trapper took 153 foxes and 47 coyotes in that area. We also use guard dogs and do a lot of riding like our cowboy said. But generally, just about two hours behind them.

Thank you for listening to my testimony. I hope you get some benefit out this.

[The statement of Mr. Wenande may be found at end of hearing.]

Mr. SAXTON. Thank you, very much. I am pleased that you said that ranchers—and I am sure that each of you would have said the

same thing—care a lot about all kinds of wildlife. I think that is a very important point.

Mr. Zimmerman.

STATEMENT OF SCOTT ZIMMERMAN, FIELD REPRESENTATIVE, ROCKY MOUNTAIN FARMERS UNION

Mr. ZIMMERMAN. Mr. Chairman and Congresswoman Cubin, thank you for the opportunity to appear before you today. I am Scott Zimmerman, a lobbyist and field person for the Rocky Mountain Farmers Union, a state affiliate of the National Farmers Union. RMFU is a three-state organization with membership in Colorado, New Mexico and Wyoming.

The timing of this hearing could not be better in respect to the season when predator losses are the greatest. As a third generation Wyoming farmer-rancher and a representative of a general farm organization, I have had the opportunity to witness the result of predator depravation firsthand and believe me, it is not a pretty sight. The sight of a newborn calf or lamb viciously killed on its first day of life evokes emotion that cannot be stated with pen and paper. The first reaction to such useless killing is retaliation, but when emotions die down and rational thinking returns, one realizes all species must share this planet for a balanced ecosystem to flourish. When the number of one species are in too great a proportion to other species or when private property damage is occurring, action must be taken by land management agencies to attempt to correct this imbalance. In our opinion, that action needs to include some sort of a Federal predator—we will get organized here—Federal predator control program that is locally administered.

Any attempt to control a particular species for the protection of another must be carefully planned and implemented to avoid upsetting the delicate balance of our ecosystem. We support a Federal predator program that assists in reducing animal losses caused by predators. That assistance should be directed by local predator control boards when requested by private livestock producers, citizens or state game managers.

As long as the Federal Government continues to be a major landowner in the western states and predator populations exceed available food sources, there needs to be a program to assist neighboring landowners in keeping losses due to predators to a minimum. We as private landowners have little input into agencies who manage wildlife numbers on publicly owned land. Additionally, factors beyond man's control; i.e, weather, available food, et cetera, greatly influence these populations. Therefore, the Federal Government, as a responsible steward of their resource and a good neighbor, needs to be an active partner in predator control programs. State predator control personnel are the closest to the problem and should be able to administer a more efficient program than their Federal counterparts. We would encourage any Federal predator control program to be developed in consultation with state and local predator control boards. It makes no sense to duplicate services and personnel in these times of short budgets, especially when there is no perceived improvement in program results.

Our organization has observed an alarming trend of increasing predatory animal populations and a corresponding number of live-

stock losses reported. These previous witnesses have documented with the statistics where these numbers are coming from. I will not repeat that.

Two other trends that I would just like to mention briefly. We see trends emerging in private land areas that may in time influence predatory animal habitat in areas where Federal landownership is predominant. One of these trends is the ever expanding urban encroachment on agricultural lands. As shopping malls, parking lots, housing developments and hobby farms reduce traditional habitat of many wildlife species, the coyote seems to adapt to these changes quite well. By being at ease around humans, the coyote is more brazen in its hunting practices. Naturally, it sees domestic livestock, particularly young ones, as an easy food source. Our members are noticing this phenomenon with alarming frequency in the front range of Colorado, where two of the nation's fastest growing counties are, Jefferson and Douglas.

Another trend worth noting are the changes in predator animal numbers brought about by the Conservation Reserve Program, CRP. In the first years of the CRP Program, rodent numbers increased greatly due to the abundance of protective cover. Within a year or two, the predatory animal numbers started increasing in relation to the increased food availability. Soon rodents were once again scarce and the predatory animals were at near record numbers. Coyote sightings have increased dramatically in my local area of southeast Wyoming over the past three years.

While we are primarily concerned with the affect predators have on domestic animals, we cannot overlook the affect these same predators have on wildlife populations. Many of our menbers are also involved in guiding hunters or outfitting to a limited degree. Most big game hunting areas in Wyoming have experienced a drop in success rates over the past years, which indicates to us that game numbers have declined. This decline can in part be blamed on increased predator losses. In our opinion, our state wildlife agency downplays the loss of big game animals due to predators. In their shoes I would do the same. After all, their money comes from license fees and the public wouldn't be as likely to purchase a license if they thought the chance of success was lessened by low big game numbers caused by predators. In 1995 Wyoming experienced one of the best growing seasons for forage production both on private and public land in its history. The 1996 hunting season should provide a clear view as to the true predator problem among big game species. If success rates are up significantly, we will know that many young survived from the 1995 season. If not, we can assume that predators are indeed a major problem for our big game populations.

Educating the public, both in the West and throughout the rest of the country, as to the damage caused by predators is paramount to a successful predator control program. The current public relations campaign to portray the wolf as a beautiful creature is a good example of misleading the American public. I have yet to see a picture of a child crying over his or her dead puppy killed by a hungry coyote right on the front porch of the parent's home. As long as the acceptance of a predatory animal—acceptance of a predatory problem—as long as the public accepts the efficient killing—let me try

again. As long as these efficient killing machines are portrayed as cute and lovable, we will not have public acceptance of a predatory problem, much less a predator control program. Society will not stand for the killing of large numbers of predatory animals. We must find new ways of dealing with this problem.

Guard dogs have proved quite successful in protecting sheep in some situations. We have watched with interest, research being conducted at universities dealing with ways to sterilize coyotes to aid in controlling population numbers. New types of fences have proved successful as a deterrent in some cases, but wouldn't be practicle in the great open expanses of the American West. We see the future of predator control embracing these technological advances. We must continue to fund research into new and better ways of dealing with this age old problem.

The coyote has not stood still. It has adapted to changes in its habitat and food source. In the cartoons, Wiley E. Coyote was easily outwitted by the Roadrunner; however, in real life, the coyote is a match for almost anyone. A number of former sheep ranchers can attest to that.

Again, thank you for the opportunity to appear before you today and I would be glad to answer any questions.

Mr. SAXTON. Barbara, you are up.

Ms. CUBIN. Thank you, Mr. Chairman.

I would like to start by asking Mr. Bourret, was 1080 banned by the EPA or by an executive order? How was 1080 banned?

Mr. BOURRET. This does not work, I guess. We will try this one. It was—there was an executive order first, on February 8, 1972, that was issued and it prohibited the use of the predator toxicants on Federal lands or in the Federal program. On March 9th, a month and a day later, the Environmental Protection Agency canceled the registrations of those toxicants. I have submitted for the record some information that indicates that in November of that same year, EPA recommended the re-registration of those toxicants but that has never happened.

Ms. CUBIN. You indicated that the Federal Government's research program—this was in your testimony—has not produced many useful tools. Could you elaborate on that for me a little bit?

Mr. BOURRET. Well, the toxic collar was being developed prior to the time of the ban on the toxicants and finally came back here a few years ago. The M–44 was developed prior to that time. So, in the 24 years since the executive order and the cancellation of the registration of the toxicants there is not any new method that has been developed in those 24 years to help these people with these problems.

Ms. CUBIN. I see that just as a huge concern. The testimony of—let me see, Game and Fish. Excuse me just a second. Yeah, Mr. Shorma. It seemed frustrating to me to hear that the Commissioner of Agriculture and the Governor believed that there is a predator problem and they have a suggested solution on how to handle that. But the Game and Fish do not really know if there is a predator problem or not and they have been in charge of the wildlife. The state of Wyoming owns the wildlife. Coyotes are wildlife. The Game and Fish's responsibility is to manage the wildlife. Does that not mean that maybe they should have the duty to con-

trol the numbers and manage the wildlife like they do deer, antelope and elk? I mean, am I missing something here, Larry?

Mr. BOURRET. Representative Cubin, in one of the documents that I asked to be inserted into the record, "Predator Damage in the West, a Study of Coyote Management Alternatives," prepared by the Fish and Wildlife Service in December of 1978, it lists a number of studies that were done in a number of states. This is "Reports of Predation as a Limiting or Regulating Influence on Ungulate Populations in North America." And table one in this particular document lists a number of these where the results were positive, and many of them were much more positive than what you heard from the Game and Fish Department representative.

When the toxicants were banned in 1972, the Wyoming Woolgrowers Association asked the Wyoming Department of Agriculture and the Game and Fish Department if they would take over the predator control program in Wyoming. Game and Fish declined and the Wyoming Department of Agriculture was inclined to go ahead and work with the people and the Wyoming Department of Agriculture attempted, through filing a registration request, emergency exemptions under FIFRA, all kinds of requests, to obtain the use of the toxicants again. The Game and Fish Department has the responsibility for the management, control, et cetera of wildlife in Wyoming.

What I see is a lack of—a lot of people want authority but they do not want the responsibility to go with it. If you can get responsibility and authority in the same body, you can usually come up with a solution.

I said that we would ask the Subcommittee or the Committee to determine if Dingell-Johnson funds could be used to pay for these losses. I suspect that if the people who now are receiving the Dingell-Johnson funds had to pay those out to the people who are suffering the losses, we would see a great deal more response from those very same people, because you have to make up the costs. The people that are paying those costs now are the people in this room behind me and other people around Wyoming and around the rest of the United States. Until the society that says they want to protect predators have to bear the burden, you are going to continue to have this problem, in my opinion.

Ms. CUBIN. So, I am still not sure—are predators wildlife? Is the state responsible to manage them? Who is responsible?

Mr. BOURRET. Under the Wyoming law, yes, predators are under the control of the Game and Fish Department, they are wildlife. Therefore, they have a responsibility, yes.

Ms. CUBIN. And so it seems unlikely to me that they should not know how many are out there or at least try to find out.

Mr. BOURRET. Well, Representative Cubin, I think that is where you get into—you have the Animal Damage Control Branch of the USDA involved, you have the Wyoming Department of Agriculture involved, you have county predatory animal districts involved and then you have Game and Fish. Of those four parties, the ones with the greatest responsibility under the present system are the three that I mentioned first. The one with the least amount of responsibility is the one that is mentioned last, and maybe they should have a great deal more responsibility because they are the ones

who, according to Wyoming law, control and manage the state's wildlife, and coyotes are wildlife.

Ms. CUBIN. But that would be a state issue rather than a Federal.

Mr. BOURRET. Yes, it would. But I would say this too, Representative Cubin, if the states had more authority and could overcome all of these restrictions—I wrote down the various laws that you have to overcome—you have the Federal Insecticide, Fungicide and Rodenticide Act, if you are going to talk anything about toxicants or any device that will repel, kill or anything else, injure a predator. You have the National Environmental Policy Act, environmental impact statements and all of that. The Endangered Species Act and the Clean Water Act, if not more laws than just that, to overcome. These people that are assigned to do these things need to be able to do these things without having to stack up 14 yards of paper before they can get started.

Ms. CUBIN. Thank you.

Mr. Wenande, how many losses due to predators do you think are actually consumed? I think people commonly believe across the country that predators only kill what they need to eat to survive. And I think that is not true. Could you fill me in on that?

Mr. WENANDE. I sure could and I would like to take both you and Representative Saxton sometime and show you some of the depredation where they say they only kill the old and the weak and the sick. During early lambing time, they will consume most of the newborn lambs that they are killing because they are taking food back to the den. Both the male and the female pack it back to the pup. Then later in the summer as the pups grow up, we go into this training session when they are training the pups how to kill. And this is when you really see the slaughter. And they do not kill them all, maybe they will rip the side out of one and his stomach is dragging on the ground and then they take another lamb and another lamb. And they may eat only one out of 15 or 20 they kill one night. And I think it is training the pups to kill and also it is kind of a joy trip, they have a lot of fun. But the coyote does not eat near what he destroys. The only time I think they do is when they are feeding the young in the den. The rest of the time, it is a fun deal. It is really sickening to ride out and see all the lambs torn up, some with their throats ripped open still walking around. It is not pretty.

Thank you.

Ms. CUBIN. Thank you. I do not have anything further, Mr. Chairman.

Mr. SAXTON. I have an interesting job as Chairman of this Subcommittee. We are supposed to find ways to make things work better. And we are currently in the process—the young lady to my left in particular—of trying to find a way to make sense out of the Endangered Species Act because it expired last year, and we have to reauthorize it. And we are going to do that, I hope, in one way or another. From my vantage point, we have seen excesses that are correctly attributed to the Endangered Species Act, where people cannot use their land for almost anything, and in this case where grizzly bears—targets were set time after time after time and the population grew, we reached those targets and still there is no seri-

ous effort to delist the species. And by the same token, as Mr. Wenande said, we all want to protect species. And so my job is to try to find a way to do away with those horror stories that we refer to as excesses resulting from ESA, and at the same time try to find a way to make it work.

Several of you have mentioned the word "partnership" or "cooperation" and I have a sneaky suspicion that if we can find a way to get more partnering into the process of wildlife management, whether it be ESA or predator control or whatever it is between Federal and state agencies, that we could move a long way toward solving many of these problems. There is nobody that knows the situation better in Wyoming than people who live in Wyoming and deal with these issues. At the same time, there is a Federal rule, it seems to me, in terms of coordinating these kinds of activities nationwide.

Would anyone like to comment on this kind of a general idea of how to get better partnering and make these laws that we are supposed to administer work better?

Mr. ZIMMERMAN. Mr. Chairman, I will take a shot at it. I do not know how effective I will be, but working for an organization that spans three states, almost from the Mexican border to within 500 miles of Montana, you have to have a situation where all agencies are willing to go a little beyond what their mission is. You have got to be able to have flexibility. And as Mr. Bourret has very efficiently—proficiently mentioned today, with the Endangered Species Act, with the Federal Rodenticide, Insecticide Act and all the other roadblocks that get in the way of state agencies doing their job, much less the private sector trying to protect our own rights and our own property, the Federal Government, in my opinion, needs to back off the regulations enough so common sense can prevail. I think if you put most of these groups that are in charge of predator control, whether it be state wildlife agencies, whether it is the Federal agencies, if you put them in a room and take the roadblocks out, I think some partnerships and some coalitions can be built that can effectively work on the problem we have now, which is trying to cut back on the predator numbers out there.

Mr. SAXTON. Anybody else want to comment?

Mr. Bourret.

Mr. BOURRET. Mr. Chairman, if you are going to overcome these things, you are going to have to do something like you are saying. Because when you have this many laws and this much case law in some cases that lays out—for example, under the Endangered Species Act, we have got so much case law back there that you can practically do nothing any more. And we have to clear that out. And therefore, we have to, I think, more clearly define what the objectives of this nation are. If this country is going to survive I think economically and pay off its national debt, which I hope some day we can, we need to start looking at where is this nation going. And we cannot continue to put roadblocks in the way of people who are going to produce economic wealth. And I think we need to get an objective out there and then dovetail all of these statutes and laws and all of that into producing something out of this country.

It is just almost to the point where the paperwork makes it impossible to do anything any more. You know, some simple amend-

ments to the Endangered Species Act would clear a lot of that up. But you have to first have the inclination to allow it to happen. If we do not change our attitude in this country, I think we are looking for more and more trouble. We talk about reducing the deficit, but I want to reduce the debt. The young people in this country are really going to face a tremendous burden, and I do not want to see them do that. I am not going to have to worry about it, but they are going to have to, and I think we need to be awfully concerned about that.

Thank you.

Mr. SAXTON. Well, thank you very much.

We could really spend a lot of time exploring a lot of issues. Mr. Julian mentioned that he spends $50,000 a year trying to protect his crop of sheep. That is an issue that we could explore for a long time. We could talk about toxicants and compensation and all of the issues that are involved here, if we had time.

We want to say that we appreciate very much all of you traveling here today to share your experiences with us and sharing the information that you have developed on a first-hand basis with us.

So thank you very much, and we hope to see you all again.

Ms. CUBIN. Mr. Chairman, I ask unanimous consent to put into the record some photographs from Mr. Schramm that are pertinent to his testimony. Also, the letter that I referred to earlier about having written to Carol Browner at the Environmental Protection Agency about the problem with the skunks.

Mr. SAXTON. Obviously, without objection we will do that.

[The letter may be found at end of hearing. The photographs were placed in Subcommittee files.]

Mr. SAXTON. We are going to move to the third panel, and so if the members of it will come forward. And while you are coming forward, I will introduce you. The first panelist will be Dr. Steve Horn, who is Dean and Director of the College of Agriculture at the University of Wyoming; Mr. Dan Chu, who is the Executive Director of the Wyoming Wildlife Federation; and Ms. Leila Stanfield from the Biodiversity Associates.

Welcome aboard. We are anxious to hear from you as well. Dr. Horn, if you would like to begin at this time.

STATEMENT OF STEVEN W. HORN, DEAN, COLLEGE OF AGRICULTURE, UNIVERSITY OF WYOMING

Mr. HORN. Thank you, Mr. Chairman, Congresswoman Cubin. Thank you for coming to Wyoming and for the opportunity for me to address this Subcommittee.

I am Steve Horn, Dean of the College of Agriculture and I represent the land grant university, the University of Wyoming, for this state. And as the land grant university, we are extremely interested in applied research and how we might tailor our academic programs and research in service and in teaching to the specific needs of the people of the state of Wyoming and to the region.

This issue, as you have learned this morning, has tremendous applied value from a research standpoint.

Mr. SAXTON. Mr. Horn, could you speak just a little louder please?

Mr. HORN. Yes. Can you hear me now?

Mr. SAXTON. Yes.

Mr. HORN. The coyote is an interesting animal, it is extremely adaptable. We have trapped this animal, we have shot it, we have poisoned it, we have dug it from its den, we have gunned it from the air for approximately 100 years now and the response of that animal has been to increase in numbers and expand its range.

Coyote predation on domestic livestock is in fact a real problem that we experience, especially in the western United States. It is a controversial issue, socially, economically, politically controversial. There are numerous studies that have been conducted that show that domestic sheep and lambs throughout the western United States are a major target of predators, especially coyotes. It is generally assumed that coyotes take approximately 2.5 percent of the adult sheep produced in the west and about 9 percent on average of lambs. Some years we have seen that increase substantially.

In 1994, USDA—these are the last figures that I had for the western United States—USDA estimated that coyotes killed 500, excuse me, predators killed over half a million sheep and lambs and coyotes were responsible for 62 percent of those losses, worth an estimated $17 million. That is a tremendous economic impact on the western United States. That is $17 million that comes out of the rural communities, that is $17 million that are not multiplied by whatever the standard multiplier might be, anywhere from three to eight times that dollar amount would turn over in that community. In that same year, here in Wyoming, we lost 96,000 sheep and lambs to predators, 72 percent documented coyotes, estimated at $4.27 million. The point of this is that coyotes do in fact take sheep and lambs and there is an economic and social burden associated with that.

Management of our predators have been oriented toward the removal of either individual animals or entire populations. As this committee is aware, as everyone in the audience is aware, societal views regarding predator control have changed very substantially in recent years. People want an effective means of controlling depredations on livestock and wildlife and they want those means to be safe, environmentally safe and they want them to be humane.

Research dealing with the manipulation of reproductive rates in wildlife has progressed substantially in recent years. There still remains, of course, many questions—ethical, economic, social, biological questions associated with broad scale use of reproductive controls in wildlife. But I am here to testify today to tell you that that is in fact a viable alternative to lethal control methods.

We have shown, research has shown that sheep losses to coyotes has declined as much as 92 percent when the coyote pups were removed from the adults. It has been theorized that sterilizing or aborting territorial coyotes can be more effective actually in reducing predation than removing pups or adults from the total population. The assumption there is that non-fertile or sterilized coyotes left in their territory will defend that territory against non-sterilized coyotes.

It has been mentioned today already that coyotes do in fact have some interesting mechanisms for adjusting their numbers when they are threatened. Coyotes have, we think, the ability to actually

adjust their fecundity. We certainly know that coyotes rear their pups more successfully when there are fewer pups.

Anyway, most of the compounds that we have tested to date are cumbersome, they require multiple treatments, they are not oral, they are not stable compounds. What we are looking at specifically at the University of Wyoming are anti-progestogens which are stable, they can be administered orally, they have been around, first reported, first patented in 1984, reported in the literature by French researchers in 1987. They have a tendency to be extremely effective, especially when combined with other drugs. Some of the newer anti-progestogens are even more effective and more selective than they used to be, they are effective at lower dosages and have the possibility of serving as blocking ovulation, not only as abortive agents.

Let me conclude by saying that there are many problems still associated with this research. Researchers at the University of Wyoming are proposing to look at anti-progestogens and other reproductive control measures for use on predators. The problem is of course societal views regarding this particular technique and the availability of the drugs. They have simply not been commercially available at this time, but we do believe that it is an effective management technique and we will continue to pursue this line of research.

Thank you, Mr. Chairman.

[The statement of Dr. Horn may be found at end of hearing.]

Mr. SAXTON. Thank you very much, Dr. Horn.

Mr. Chu.

STATEMENT OF DAN CHU, EXECUTIVE DIRECTOR, WYOMING WILDLIFE FEDERATION

Mr. CHU. Thank you. My name is Dan Chu, I am Executive Director for the Wyoming Wildlife Federation.

I would like to thank Congressman Saxton and Congresswoman Cubin for this opportunity to speak to you today and provide our perspective on the issue of predator control and management here in Wyoming.

The Wyoming Wildlife Federation is the largest statewide wildlife advocacy group in Wyoming. We represent thousands of wildlife enthusiasts who are united by a deep commitment to the protection of wildlife habitat, the perpetuation of quality hunting and fishing and the protection of the public's right to access public lands.

Today, I would like to address the issue of predator control and its impact on the hunters and game species of our state. Predation is essential to the natural balance healthy ecosystems need to maintain viable wildlife populations. Predation has shaped how our wildlife looks and behaves today. Characteristics such as the antelope's speed and large eyes and a mule deer's quick bound for cover, largely arose as adaptations to the pressures of eluding predators. These attributes of our wildlife make a fair chase hunt one of the most exciting and fulfilling challenges a hunter ever experiences.

Predators also maintain fitness of game populations by weeding out the weak and sick individuals.

Finally, predation helps keep prey populations in balance with habitat. For instance, studies show that an increase in fawn survival due to predator control does not necessarily result in an overall increase in herd numbers. Mortality just simply increases at a later time due to the carrying capacity of the land and habitat. What that means is that simply a higher percentage of those animals will starve because they exceed the carrying capacity of the forage on that habitat.

If not for predators, most prey populations would fluctuate wildly, experiencing periodic crashes in numbers.

The Federation believes that when predator management is considered as an option in the management of game populations, the following points should be considered:

1. What condition is the habitat in?
2. Is the predator control program economically feasible?
3. Is there good evidence that predators are actually suppressing game numbers?
4. Is the predator control program specifically targeted at offending animals?
5. Is the method of control lethal or non-lethal?

We firmly believe that predator management must be driven by good data and science and not simply emotion and anecdotes.

What condition is the habitat in?

Many wildlife population studies have shown that impacts to game populations from predators is minor when compared to other impacts such as weather, hunting and habitat condition. Abnormal losses of game to predators is usually a symptom of the larger problem of poor habitat. Poor range condition results in reduced cover and forage, increasing the vulnerability of game to predation. Reduced water sources have been shown in some studies to result in weaker populations of desert sheep with a resultant secondary increase in the rate of predation on those sheep. Poor habitat conditions are the most significant negative impact on the health and numbers of our wildlife. In the end, predator control will not reverse the situation of animal populations declining due to habitat deterioration and over-use.

Is the predator control program economically feasible?

Studies on the effect of predation on game animals show that general predator control programs that are conducted with the intent to benefit game populations are not cost-effective. In fact, the Wildlife Management Institute, in a recent audit of the Wyoming Game and Fish Department stated that effective broad scale predator reduction programs cannot be sustained economically. When big game herds and habitat are in balance, predation is but one of a set of factors influencing that balance. If predator control is undertaken, it should focus only on situations where short-term selective reduction of predator numbers can enhance other targeted wildlife populations.

This is a real pragmatic approach to defining if predators have an impact on targeted game animals. An example of this is a study conducted in Colorado regarding the interaction between coyote and mule deer. The study showed that the increase in the number of deer realized from an intensive coyote control program is greatly outweighed by the cost of that program. This study suggests that

for the Wyoming Game and Fish Department to initiate a similar program, the cost per head for producing deer would dramatically increase.

In the face of limited economic resources available for wildlife management agencies, we strongly believe it is much more cost-effective and beneficial to wildlife to focus on activities that protect and enhance wildlife habitat. Presently the Game and Fish Department contributes $100,000 to predator management. Recent state legislation states that the Game and Fish Commission may now spend up to four percent of hunting and fishing license fees on predator management, estimated at $800,000 a year. The sportsmen in the state want to be assured that their license fee dollars will be spent for the benefit of wildlife and not to fund predator control that subsidize agricultural commodities.

Let me try and summarize here.

Mr. SAXTON. Why do you not go ahead and finish, take your time. We are in good shape time wise.

Mr. CHU. Thank you.

Is there good evidence that predators are suppressing game numbers?

Presently, there is little hard data supporting the contention that predators are having a significant impact on the game populations in Wyoming. In fact, a substantial amount of money has been poured into coyote lethal control in southwest Wyoming, yet there is no evidence that herd numbers for deer and antelope have increased due to those control programs.

If a significant predator control program is to be continued in Wyoming, we believe that a greater percentage of funding for predator management must be dedicated to conducting solid scientific studies on the true impact of predation on our game populations. Essentially, what is the real contribution of predation as compared with other factors such as habitat condition, weather and hunter harvest?

Is the predator control specifically targeted at offending animals?

Highly targeted predator control programs identify individual problem predators and are most successful when used in livestock management and in rare cases of initial reintroduction of certain wildlife species. For instance, field autopsies of coyotes killed by indiscriminate lethal control programs has shown that a high percentage of these animals survive by preying on rodents and insects and actually benefited agriculture by contributing to integrated pest management.

A successful targeted lethal control program for coyotes would focus on eliminating those coyotes that have learned to prey upon livestock while acknowledging the benefits for pest control from coyotes that have not learned to prey upon livestock. Indiscriminate attempts at predator control are very costly, ineffective and often kill many non-targeted animals.

Is the predator control lethal or non-lethal?

The Federation supports pursuing non-lethal preventative means of controlling the impact of predation on livestock. An example of the benefits of non-lethal predator management can be seen gaining acceptance by many woolgrowers. More and more sheep operators are switching to preventative measures to reduce predator

losses in their flocks. The use of sheep dogs, llamas, mules, lambing sheds and an increase in the number of sheepherders have paid off by dramatically lowering sheep losses in some states.

The Federation does support a sensible, cost-effective predator management program when they are based upon sound science. However, when the beneficiary of a predator control program is solely the agricultural community, we believe it is only fair that the agricultural community should bear the financial responsibility for that program.

Predator control should only be used in those instances where the need can be scientifically documented and where the cost of any predator control program is feasible. The Wyoming Wildlife Federation believes that good wildlife management must focus on habitat protection and improvement to ultimately be successful at maintaining and enhancing healthy populations of game species in Wyoming.

I appreciate your patience in allowing me to speak beyond my limit. Thank you very much.

Mr. SAXTON. Thank you, Mr. Chu.

Ms. Stanfield.

STATEMENT OF LEILA STANFIELD, BIODIVERSITY ASSOCIATES

Ms. STANFIELD. Thank you.

Mr. SAXTON. What is the function of Biodiversity Associates? Are you a public organization?

Ms. STANFIELD. We are a non-profit environmental group based in Laramie, Wyoming, down in the southeast corner and we research and write on ecological issues in the Rocky Mountains.

Mr. SAXTON. Thank you. Can you move your microphone a little closer? There you go.

Ms. STANFIELD. Better?

Ms. CUBIN. Yes.

Ms. STANFIELD. OK, thanks.

Thanks very much to the Subcommittee for convening this hearing and as the last speaker said, thank you for your patience in waiting to hear from me.

My name is Leila Stanfield and I have lived and worked in Wyoming since 1969. Our group Biodiversity Associates—we have also had a group in the past called Friends of Bow that worked primarily on the Medicine Bow National Forest—is based in Laramie and works on protecting and restoring native species, mostly in the Rocky Mountains. We do research and writing on biological diversity issues and we have come to understand that predatory animals are not varmints to be exterminated, but are indeed wildlife and that, as such, they are essential elements of a healthy ecosystem.

The stated purpose of this hearing is to discuss the "need for predator control" and its acceptable implementation. The written testimony we submitted, which includes a bibliography of scientific research that we have come across that we thought might be helpful, discusses these topics to a greater detail than I can today. But just to mention three points before we have questions:

On the need for predator control, we have heard a lot of statistics today and I will not go into that. We point out that the need has

not been verified and that there is a need to do this. Obviously, people are having these experiences, but the losses themselves need to be verified. There is research that disputes the need. A 1977 study done in Wyoming on five ranches over a three year period shows predators killed on average 0.2 percent of ewes and only 1.5 percent to 3.2 percent of lambs. These levels of loss cannot be considered significant.

The Wyoming study also found other causes killed four to five times as many sheep as predators do, and that has not been mentioned here today. Those causes include disease, exposure, starvation, accidents, poisonous plants, stillbirths and others. And in the others category, sheep owners attributed these losses to predators but the researchers themselves found that they were "mainly due to miscounting and loose management."

The Wyoming study was a statistically valid sampling, the results are consistent with findings reported by other researchers in other parts of the country. Congress should rely on statistically valid research and not base the need for a predator control program on the exaggerated losses that are often reported.

Research demonstrates that predatory wildlife is only a small part of the problem of livestock losses, and thus there is a lack of justification for continuing the massive Federal predator control program at taxpayer expense.

Number two, on the effectiveness of predator control, extensive lethal predator control obviously has not provided the long-term solutions to livestock losses. Everyone who spoke today of the last 60 to 100 years of predator killing and killing of coyotes indicated that livestock owners are seeing that predation——

Mr. SAXTON. We are having a real microphone problem again. Lisa, would you see if you have got one that works there?

[Brief pause.]

Ms. STANFIELD. Is that better?

Mr. SAXTON. Yes, thank you.

Ms. STANFIELD. Thanks. It tells me you are listening.

The past 60 years of trying to kill coyotes, as the current reports from livestock owners indicates, shows that predator losses are increasing even though we have this massive program. It is well documented that when coyote populations are subjected to indiscriminate killing, the animals respond by increasing their rate of reproduction, which was mentioned earlier. Compensatory reproduction results in younger, more aggressive animals, leading to an increase, not a decrease, in depredation.

Regarding predator control to improve wildlife numbers, Wyoming Game and Fish Department concluded in a study that we have seen from 1989, that it is not a cost-effective method. The analysis found that "Where high levels of predation are occurring on game populations" and they mention deer and ground nesting birds like pheasants, "there is invariably a habitat problem." The analysis said "Killing more coyotes would not increase fawn mortality, but only change the cause of mortality to things like accidents, disease and starvation."

Also, experimental drugs such as the coyote abortion pill which we have been discussing today, we feel should not be used until we understand more clearly the impacts of these kinds of

biotechnologies on native biological diversity and ecosystem functioning.

Lethal predator control is not an effective means of reducing livestock depredation. We all seem to agree on that. We think it would be better, and there are many researchers who mentioned this, to stop killing coyotes and allow these populations to mature and stabilize.

And then the last point, three, on what would be acceptable effective methods of controlling depredation. We would like to ask the Committee to really consider the difference between "predator control" and "depredation control." Predator control is not acceptable to many in the public. Depredation control is acceptable. An acceptable depredation program is based on guard animals, shed lambing, increasing herders and paying them more, and removing and reducing livestock in areas of historically high levels of predation like the one mentioned earlier with the grizzly bear. If there is to be any predator control, then on private lands, this control should be a private landowner responsibility and not one to be borne by the government and the taxpayers. On public land, we feel public wildlife should not be killed at all to benefit private, commercial interests. Predator control is not a ranching-versus-the-environment issue. Some losses due to predators obviously are going to take place and these should be viewed as part of the cost of doing business. Using non-lethal means, society can preserve wildlife, decrease the loss of livestock, save taxpayer money and live more in harmony with the natural world. The alternative is permanently damaging the environment, and this is not acceptable.

Finally, we think Congress should put an end to government subsidies for killing predator wildlife. An emphasis should be technical support to livestock operators to help them reduce depredation using good husbandry practices. And if there is a question about shifting that to state control, we also have something to say about that.

Finally, we acknowledge that there are no easy answers to the questions of how to deal with those processes in nature over which we have no control. We think Congress should be the leader in articulating our nation's environmental laws like the National Environmental Policy Act, which gives us the following direction: "It is the continued policy of the Federal Government to use all practicable means and measures to create and maintain conditions under which man and nature can exist in productive harmony."

Thank you.

[The statement of Ms. Stanfield may be found at end of hearing.]

Mr. SAXTON. Thank you very much.

Ms. CUBIN. Thank you, thank all three of you.

I am going to start with Leila, since she is the latest one. You mentioned a study that had been done—let me get my questions for you out here—you mentioned a study that had been done in Wyoming. I wonder who did that study?

Ms. STANFIELD. The study was done by Tigner and Larson and the name of the study was "Sheep Losses on Selected Ranches in Southern Wyoming." That was reprinted in the Journal of Range Management, and I can give you a cite on it.

Ms. CUBIN. Tell me a little bit about the people that did the study, and do you know what particular—whose ranches they were on?

Ms. STANFIELD. Actually, I do not know that off the top of my head, but the article described who the people were that they were meeting with. It was around the Rawlins area.

Ms. CUBIN. Palm Livestock maybe?

Ms. STANFIELD. No, I do not believe it was Palm, Palm is more up toward where we are in Albany County I think and this was over in Carbon County, I am pretty sure.

Ms. CUBIN. Well, Palm is in Carbon County.

Ms. STANFIELD. Are they in Carbon also?

Ms. CUBIN. Uh-huh. Well, OK, I would appreciate all the cites and the study, if you could get that to us.

Ms. STANFIELD. I would be happy to.

Ms. CUBIN. You mentioned early on in your testimony that exterminating coyotes was just wrong. I have not heard anyone here today say that—or anyone anywhere any time say that coyotes should be exterminated. All I have ever heard is people have asked for control. You do not think extermination and control are the same thing?

Ms. STANFIELD. No, I do not think they are the same thing. I have concern when I hear the comments about reducing Federal restrictions where we are talking about the use of poisons, gunning, gassing.

Ms. CUBIN. I just want to make sure that everyone understands that no one is talking about extermination.

You have said and others have said that you cannot—that no one can verify a need for predator control. I think that you also stated that the losses, the reported losses are very exaggerated, that predators only amount to a small portion of these losses. I believe that is all in your testimony.

I have a hard time looking at the people that testified here and looking at the other people here in the audience that I know that are involved in agriculture thinking that they are exaggerating what they are saying. They know—I mean they know how many animals they have that are living, they know how many babies are born, they know where they are. And they count. And when they go find one, they know what has happened to it, they know if it fell off a ravine, they know if a predator killed it.

So, I would like you to justify that remark that they are exaggerated.

Ms. STANFIELD. Well, I appreciate your question, because I think that when people have experiences in their personal lives, as we are hearing about today—and I am not trying to demean their personal experiences—those are very real to them. What I am trying to suggest to you is that you look at, for example, the statistics that come out of the Department of Agriculture or from the National Animal Statistical Service, NASS. There is a report that shows that in 1991, NASS reported 50 calves lost to predation in Wyoming and ADC reported zero.

Ms. CUBIN. And are you saying then that that is the entire loss in Wyoming, the number that they represent? I do not think it could be.

Ms. STANFIELD. Well, what I am trying to say is there is always a dispute about what the amount is. And for example, in the Tigner and Larson study, they found that other causes of sheep mortality observed were 31 percent from disease, 32 percent from exposure, 18 percent from starvation, 10 percent from accidents. Stillbirths accounted for 11 percent, one percent physical abnormality and then other non-predatory causes up to 16 percent. So all I am saying is that you have these other causes that are taking place.

The other factor here is that coyotes also scavenge on dead animals who die for another reason. So while the ranchers may see the animals, domestic animals that they have lost, they may not be in the best position to verify the death. And all I am saying is that with the researchers, they have no motive to give you a different reason.

Ms. CUBIN. So you are saying the rancher has a motive to exaggerate the numbers?

Ms. STANFIELD. I am saying that in our personal lives when we lose things, that those loom very big for us. And I am also saying——

Ms. CUBIN. So you are saying they are not exaggerating or they are exaggerating?

Ms. STANFIELD. I am saying that the losses are exaggerated as they are reported and that they are not reliable.

Ms. CUBIN. And I would venture to say that many of the people in this room might say the same thing about the study that you are quoting, that predators are of small impact. I am one, I have been studying this ever since I have been in government and I do not for one minute believe that predators are a small problem. Yes, we all know that deaths occur due to other things, but you know, maybe we all exaggerate things in our mind for how we want them to be rather than how they are. I do not know.

You talked about how we have a massive program, you said, and still the kills continue to go on and that the predators are still there and so on. But you talked about this massive program that we have for predator control. Tell me what that program is and tell me what these folks out here can really actually do—not what—you know, like they cannot use 1080, so do not tell me that is part of the program. Tell me what is this massive program to help them that is funded by the Federal Government.

Ms. STANFIELD. Well, I am talking about the $31 million that ADC gets in Federal dollars.

Ms. CUBIN. But that does not help the problem of the predators killing livestock.

Ms. STANFIELD. And I am talking about the million dollars that comes to Wyoming for the killing of the wildlife, for this program. And what I am talking about is that you have this massive structure where you have all this money going into pilots and gunners and trappers and killers and it is not changing, just as you pointed out, it is not changing the depredation problem.

Ms. CUBIN. I suggest that the reason it is not changing is because the tools to make it change are being denied the people who could make it work.

Now, agriculture, you will admit, is a large—the second to the largest industry in the state. Now these people tell us—and you think they exaggerate—but they tell us that we are going to go out of business if we cannot do something about this. Assuming what they are saying is true, how do you propose to economically take care of that problem? Or should we not? Should we just allow the industry and all these people to lose everything.

Ms. STANFIELD. I do not think we should abandon them by any means. I do not think they are going to go out of business because——

Ms. CUBIN. But you do not have anything to base that on.

Ms. STANFIELD. You asked me if I assumed that to be true, and I do not assume that to be true.

What I know a little bit about in terms of the tools that you are talking about is that there are studies that show, and that we listed in the bibliography, that the difference in losses between the pre–1080 period and the period of 1080 use are not there. Those differences that people claim are absolutely not there.

Ms. CUBIN. According to that study.

All right. Mr. Chu, could you correlate with me or for me the difference in the treatment of the noxious weeds that Commissioner Micheli spoke of and predators? Do we not value—I mean the Endangered Species Act certainly has plants in it and we are spending hundreds of thousands or maybe millions, I do not know, on trying to do away with noxious weeds because they are going to change the biodiversity of areas. Now what is the different between coyotes changing the area and weeds? They are all living things. Could you just correlate that for me?

Mr. CHU. I am not really clear on what the question was, but——

Ms. CUBIN. Well, you heard Mr. Micheli's testimony about the hundreds of thousands, if not millions, of dollars that are being spent to alleviate noxious weeds that are going to take over all of the grasses that feed the wildlife, feed the livestock and so on. You heard that testimony?

Mr. CHU. Yeah. And——

Ms. CUBIN. OK, so what is the difference between a plant making those kind of changes and a coyote, for example?

Mr. CHU. Well, I think both of them are federally funded programs. I mean—I am still not quite sure how to answer this question, but certainly noxious weeds are also contributing, to some extent, to livestock losses say from larkspur poisoning, for instance. Now is the question—are you saying why——

Ms. CUBIN. I am saying why, on the one hand, do we not allow the biodiversity or the ecological system to be changed and then on the other hand, we do. What is the difference between the two situations?

Mr. CHU. I think we do allow changes from predator control right now, through the ADC program.

Ms. CUBIN. No, no. Well, explain to me how do we allow changes.

Mr. CHU. I mean, there is predator control ongoing right now in Wyoming. So there are——

Ms. CUBIN. What is that predator control?

Mr. CHU. Well, I mean it has been talked about before, but I think also when you look at——

Ms. CUBIN. No, what is the predator control? I know money is paid to people when they lose livestock. That is not predator control, that is reimbursement for lost property. What predator control is occurring in Wyoming?

Mr. CHU. I am not sure about all of them, but I do know that on private lands, it is different than on Federal lands, as previous people have mentioned. You know, I imagine that includes trapping and since coyotes do not have any season on them, you can go out and shoot them any time of the year. In fact, I know a number of hunters who, when they go out onto a rancher's land and the rancher will ask them, well, if you see a coyote out there, go ahead and shoot him for me, the hunter will go ahead and do that.

Ms. CUBIN. But that is not a Federal predator control program. This is the point I am trying to make. There is nobody who is collecting the information as to how many predators are out there, how many kills they are making, and so people who do not want any sort of predator control say well, you cannot verify it. Well it seems—and I might be mistaken here—but it seems to me that the very people who should be verifying it and that does not include you, by the way, but the people who should be verifying what is happening out there with predators do not want to have predator control, so they are not trying to gather the information. That is what I have derived from this hearing so far.

Mr. CHU. Well, I think if you are talking about the Game and Fish Department—as I mentioned earlier, presently $100,000 a year goes toward predator management and research that comes out of the Game and Fish fund, and I know that in particular, in relation to Terry Schramm's concern, he cooperated with the Game and Fish on a study to look at grizzly bear depredation on cattle. So I think that there is an instance where the Game and Fish Department did try to determine what the depredation was, what the rate of actual cattle killed by the grizzly bears as opposed to the cattle that had died from disease and then were scavenged.

Ms. CUBIN. But do you think that one study is adequate to determine the whole answer to the whole problem?

Mr. CHU. No, I do not, but I believe that it is a start and there are other studies as well being done by the Game and Fish Department and by the Department of Agriculture, and certainly by research people as well as evidenced by some of these papers that came up.

But to get back to the question, I guess I would also say that I know that noxious weed control on Federal land is subject to the same amount of public comment and NEPA—the NEPA process—as say a predator control program is on public land.

Ms. CUBIN. Who should verify whether or not there is a need for predator control? Not the money that is paid for losses, but for actual predator control, who should verify that need?

Mr. CHU. Verify the——

Ms. CUBIN. The need for it or the lack of need for it. Who should do that?

Mr. CHU. Well, I think it depends on what the end result is going to come out of that proposed predator control.

Ms. CUBIN. Well, you do not know what the end result is going to be until you find out if there is a need.

Mr. CHU. No, what I am saying is if the purpose of the predator control is to increase livestock production, then I think the responsibility lies on agricultural people and the Department of Agriculture. If the purpose of that predator control is to increase wildlife numbers, then I think the burden of determining if predators are impacting should rest on the wildlife management agencies.

Ms. CUBIN. And what if it is both?

Mr. CHU. If it is both, let us hope they can work together on it.

Ms. CUBIN. OK. I only have a couple more questions.

Would you agree with me—well, who would you say—what person or group of people in this state provides the most habitat for wildlife?

Mr. CHU. It depends on how you look at it. I think private landowners provide a large amount of habitat, I think the Federal Government provides a large amount of habitat as well, and frankly, I think hunters and anglers provide a large amount of habitat by providing funding for wildlife agencies to do habitat protection, enhancement, acquisition and wildlife management.

Ms. CUBIN. OK, so you admit that private landowners contribute—they subsidize wildlife because they provide habitat and they provide food to wildlife.

Mr. CHU. Well, gee, I hate to use the word subsidize——

Ms. CUBIN. Well, sure you do, but you know——

Mr. CHU. —yeah, and I have never—I do not think our organization has ever come out and not acknowledged the contribution that private landowners give for wildlife habitat.

Ms. CUBIN. OK. So then maybe do we not have a responsibility to compensate them for how they subsidize wildlife?

Mr. CHU. Oh, I agree, and that is why the Game and Fish Department does pay out damage claims. For instance, they pay out damage claims for forage that elk eat on private lands. They pay out damage claims for trophy game animal depredations and also I think that, you know, landowner coupons also contribute to private landowners, in frankly acknowledgement for the habitat they provide for wildlife.

Ms. CUBIN. I agree with that.

I would like Ms. Stanfield to answer that question. Would you agree that folks in agriculture contribute to providing habitat and food? I use the word, therefore, subsidizing wildlife. Would you agree that landowners do in fact provide habitat and food?

Ms. STANFIELD. I think that we are all living on the earth here and we are all contributing.

Ms. CUBIN. So maybe you think that there should be no private landowners?

Ms. STANFIELD. I think that, you know—I do not know exactly where your question is going, but I think that the point we are trying to make is that we need to live in harmony with the systems that are here.

Ms. CUBIN. We all agree with that.

Ms. STANFIELD. And we ought not put a lot of our energy and more and more government subsidies into eliminating or reducing the populations of certain wildlife when we do not understand what part they play. And so I think what we are asking for is that more of our energy and attention, whether it be research or anything

else, and money, go into figuring how to live with it rather than to dominate it.

Ms. CUBIN. I think we all agree—I think we all agree that we ought to live in harmony on this earth, that we are all interconnected, that we are all part of what life is, and that includes plants and that includes animals. No one here especially would argue that point, but if we all are a part of it, then we all have a responsibility for it, then why should we not all pay those people that are bearing the cost for it? Why should we not share the burden, why should we not?

Ms. STANFIELD. Well, I think that we are, except I think that what I am not sure is where you are going——

Ms. CUBIN. But you said you disagreed with that earlier, you said we should not be paying them. So I am just asking you, if we are all a part, why not? Why should we expect them to take all responsibility?

Ms. STANFIELD. Well, we all take responsibility for our part, I think that is how it works.

Ms. CUBIN. But some people have a bigger part than others, is that it?

Ms. STANFIELD. Well, if I have—you know, if I have a problem with weeds around my house, I take care of it. I may not put poisons on it, but I will take care of it to the degree that I can.

Ms. CUBIN. Thank you.

One quick question for Dr. Horn. You talked about abortiophasics—is that——

Mr. HORN. Abortifacients.

Ms. CUBIN. OK. They cause abortions. And I believe one drug that you referred to was RU–486, and that originally was developed in France, is this right?

Mr. HORN. That is right.

Ms. CUBIN. And the United States forbade import of that drug into its borders. So you are having trouble getting this drug? Explain your difficulties to me, that you are having going on with your research.

Mr. HORN. I would be happy to.

That particular drug, RU–486, the actual name of it is something called mifepristone, developed by French researchers in the mid–1980's, is on the U.S. import ban list, as are all anti-progestogens—there are none that I am aware of that are commercially available to the citizenry of this country at this time. Even if they were not on the U.S. import ban list, there are several questions that need to be answered to satisfy both FDA and from a field application standpoint, EPA. I am not sure if I can answer why those drugs are not available. I would venture to guess that the reasons are primarily political. It is possible, however, to synthesize some of these drugs. A researcher at Columbia University recently has synthesized mifepristone, RU–486. The literature does contain enough information that a competent chemist probably could reproduce these compounds and we do not know what the cost is, we are investigating that possibility right now. But it is impossible to receive those drugs. These are the anti-progestogens which I would again state are stable compounds and can be applied orally, and that is the problem with broad scale contraception in wildlife, is

that virtually everything that has been used to date has either been, you know, a mechanical or has been injected. And that is of little value from a field application standpoint.

And I would stress too, that we are only at the point of looking at the efficacy of this type of research and how it might be applied. Lots of questions would still need to be answered as to how do we provide that particular compound in a field situation, how do we make it specie-specific, how do we ensure that there is no environmental danger. And our research proposal that we are currently working on addresses all of those questions.

Ms. CUBIN. Are there any legal complications with synthesizing that drug here in the United States?

Mr. HORN. It is my understanding from the U.S. Patent Office that you can synthesize small quantities of those drugs and use them for research purposes only. But they cannot be sold.

Ms. CUBIN. OK. If everything went well, let us say you had the money to synthesize the drug, is that—I mean, is a year a reasonable amount of time?

Mr. HORN. Probably three years is more like a reasonable time to do a good pilot study.

Ms. CUBIN. No, I am just talking about on synthesizing the——

Mr. HORN. Oh, yes. Yeah, I think that is a very reasonable time. I think we could synthesize the drug in a matter of months.

Ms. CUBIN. OK. So, we will give you a little extra time because you might have a problem. So, say a year. OK, you have the drug, then how long before you would be able to make some recommendations that actually might be able—or how long before you could come up with something that would be of use in the field, assuming it turned out that way?

Mr. HORN. Oh, it's probably years away. I wish I had a definitive answer for you, Representative Cubin. There are many steps involved before something could enter the commercial arena and be available to producers for use. It would, of course, have to go through a very lengthy and a very expensive registration process. I think a rule of thumb there—and if someone has a better figure than I, please offer it. But, I think the rule of thumb there is at least five years.

Ms. CUBIN. So, that is not very—I mean, while it is optimistic that research is going on and looking promising, it is not very helpful for now and the problems that we are facing now.

Mr. HORN. Unfortunately.

Ms. CUBIN. So, we do need to look more and try to work things out more. Thank you, very much.

Mr. SAXTON. Thank you.

Mr. Chu, how do you feel about the use of these drugs?

Mr. CHU. Well, I think certainly if we can target those drugs at—and I am sure that Dr. Horn has looked at some research on how to do this. But target those drugs once again at the offending individual, say for instance, coyotes. I think that is going to be most effective. I think if you go ahead and just use those drugs once again in a generalized way and just bring down the total population of coyotes, you may be seeing some secondary problems from an increase in rodent population or, you know, other secondary effects. So, I think once again, if that can be targeted either through,

you know, giving it an oral means, maybe—I do not know, maybe having them on some sort of oral—giving them orally close to where lambing and sheep are and hit some of the coyotes that are—that seem to be the problem coyotes, then certainly that is probably going to be the best way to go about it.

Mr. SAXTON. Can you tell me how you identify which coyotes are problems?

[Laughter.]

Mr. SAXTON. I do not mean that to be funny. I watched a documentary story recently on television. It was about the elephant population in Kenya. Maybe you saw it. It was a story about a young woman, who at the age of 19 decided it was her mission in life, back in the late 1970's or early 1980's, to save the elephant population from predation, from hunters who were killing them for ivory. And incidently, one of the first bills that I voted on in Congress was a bill to ban the importation of ivory in this country for the same reason. And this young woman worked very hard for many years to save the elephant herd and finally she was successful. The population began to expand. In the meantime, the population of Kenya increased and agricultural pursuits increased and the elephants became less than totally controllable and began to damage, to a significant degree, the crops of the farmers in Kenya. The story came to a conclusion with this lady identifying those elephants that were the leaders of the packs or the herds, I guess——

Mr. CHU. Packs—elephants?

Mr. SAXTON. Pachyderms.

[Laughter.]

Mr. SAXTON. Whatever their families are called.

Ms. CUBIN. Bunches.

Mr. SAXTON. Bunches, right.

[Laughter.]

Mr. SAXTON. And the same young woman finally decided that the only way that she could preserve the elephant population at a sustainable level was to herself order or encourage the killing of some of the elephants because the herd was by Kenyan standards out of control. They were able to identify the leaders of the herds, I suppose, because it is a little different than trying to find a leader of a coyote pack. So, I am just curious about how that—I guess you would look in an area and say, OK, coyotes are a problem in this area; therefore, all coyotes in the proximity to these ranches are the problems. I do not quite understand.

Mr. CHU. Yeah, I mean, it is not an easy question. I will try and answer it. But, I think maybe one way is relying to a large extent on the expertise of the sheepherders that are out there and if they identify coyotes—I do not know if there is a possibility they can mark them or use some sort of way to bring them into an area to, you know, say allow for oral administration of a abortion drug. I guess you could call it that. I mean, one of the concerns which you have heard earlier is that when you take out any number of animals, say coyotes in a given population, what will happen is that litter sizes in other coyote—from other coyotes will increase and they will compensate for it. In general, I think predator populations are very much in sync with the amount of resource that is out there to support a population. So, you know, you will see the

litter size increase and if that happens to be a litter where the adults have learned to kill sheep, then that certainly is going to exacerbate the problem.

Ms. STANFIELD. May I just say something?

Mr. SAXTON. Sure.

Ms. STANFIELD. I think it is a really good question and I certainly do not have the answer to it. But, you know, that swift fox are, at least in 1994, Fish and Wildlife said, you know, this is a species that is in trouble. Well, we are talking about the same habitat. We are talking about canines. How are you going to be specific about not targeting these species? We are talking about—on the prairie lands, we are talking about ferret habitat, a massive reintroduction program in this state. You know, we do not know how to use these biochemical technologies. I guess the thing that I read in the paper in the last two weeks that was most interesting to me came from a researcher up in the Yellowstone area who has been watching the effect on coyote populations now that wolves are being reintroduced. Perhaps you saw that article. You know, basically, there is a new hierarchy being reestablished in the natural predation chain. So, we have to be careful about—we have to be limiting ourselves. I think that is what it keeps coming back to a lot. Your story about the elephants is really powerful because it is very much a story about how human beings are taking over the habitat of other animals and so much of the question is how will we live in harmony with what exists here. I appreciate when I hear from the ranching community how close they are to these other communities of animals, birds and plants. So, they have a connection to it. Somewhere along the line, we got the idea that if we brought in the Federal money and we beefed up the technologies, that we could change the world somehow. And it is so obvious that we are not doing it. So, I really—it is going to take someone much wiser than I am to know what the answer is. But, I do not believe that it is not in the form of a new chemical.

Mr. SAXTON. Well, thank you very much. I have no other questions.

Barbara, do you have any questions?

Ms. CUBIN. I just want to make a statement. Go ahead.

Mr. SAXTON. OK. Well, listen, thank you very much for being with us today. We appreciate your testimony and the thoughts that you have had to share with us.

We are going to close the hearing but before we do that, Ms. Cubin has a statement that she would like to make.

Ms. CUBIN. Thank you.

I would especially like to thank Chairman Saxton for being here. Although, he has a New Jersey address, he does have a Wyoming heart. So, we do appreciate your long travel.

Also, Bobby Acord, who came all the way from Washington, although he came to a much better place. Thank you.

And Mr. Chu and Ms. Stanfield and Mr. Shorma, you know, I am a very passionate person and sometimes I become more intense than I really mean and I think it is only fair that some day you all should have me on a panel and you should have the microphone because I very, very much appreciate your input. I think we cannot make decisions as important as this if we do not have everyone's

views and all the information. We obviously cannot please everyone, but I think this hearing has been very good for me because I do believe that I have learned a lot. I know that we will be able to work together to find some solutions. I think maybe some potential suggestions have come out today or will evolve from this hearing.

I want to thank Ron Micheli for being here representing the Governor. He was a very—still is a wonderful friend. I went into the legislature and he was in the leadership at the time and he is still the great man that he was. He is a trusted friend of the Governor's and I really appreciate your being here, Ron.

And then, Truman and Cindy, thank you for coming. You have been helpful here and I know that wherever you are out there, you will be helping us with the grazing bill that we will be working on pretty soon.

Bryce Reese with the Woolgrowers helped us put this together. He did a lot of work. Thank you.

And Terry Schramm, your colorful testimony is going to bring Jim back to Wyoming. So, we all owe you a debt of gratitude for that.

The staff, Sharon McKenna and Lisa Rulli, as well as my staff, Jackie King, Jodi Brayton and Mantha Phillips.

Thank you all very much. Be in touch with us. We are here to serve you. This is your congressional seat and I am only in it as a privilege that you have granted me and I want to do all I can to serve your needs. So, be in touch. Thanks.

[Applause.]

Mr. SAXTON. Thank you very much. I would just like to remind everyone that the record will remain open for 30 days in order that the members of the public can submit additional testimony. The hearing is adjourned.

[Whereupon, at 2:08 p.m., the Subcommittee was adjourned; and the following was submitted for the record:]

REMARKS OF BOBBY ACORD
DEPUTY ADMINISTRATOR
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
U.S. DEPARTMENT OF AGRICULTURE
BEFORE
THE HOUSE COMMITTEE ON RESOURCES
SUBCOMMITTEE ON FISHERIES, WILDLIFE, AND OCEANS
GILLETTE, WYOMING
APRIL 10, 1996

I would like to thank the Subcommittee for having me here today to talk about the Animal Damage Control (ADC) program's efforts to deal with predation problems here in the West. I don't need to tell any of you that these are challenging times for the farming and ranching community; this hearing is an excellent opportunity to discuss what ADC has been doing to lessen predation problems and explore ways to improve upon the services we provide. With me today are Mr. Mike Worthen, our Western Region Director, Mr. Rick Phillips, our State Director for Wyoming, and Mr. Guy Connolly of our Denver Wildlife Research Center's Predator Division. After presentation of my statement, we would be pleased to answer any questions you may have.

History and Orientation of the ADC Program:

I would like to begin by providing some basic background on the ADC program and the reasons for its existence. The ADC program was established more than 65 years ago in response to requests for assistance in preventing livestock depredation by wild animals. Over time, the program has grown to address the damage that wildlife can cause to crops, natural resources, facilities and structures, and human health and safety. Each year, we respond to about 100,000 requests for assistance in stemming hundreds of millions of dollars in losses. Underlying the ADC program is a fundamental principle: that our Nation's wildlife is held in trust for all Americans. It is a publicly owned resource. Nevertheless, the government has a responsibility to help limit in the most responsible way possible the serious damage that can be caused by wildlife.

We recognize that wildlife has economic, recreational, and aesthetic values for all Americans. Our mission is to provide Federal leadership in managing problems caused by wildlife. We use an integrated management approach to prevent or minimize wildlife conflicts with humans and agriculture. This approach involves integrating and applying practical, safe, effective, and biologically and environmentally sound methods of prevention and control. Nonlethal methods--like guard dogs, exclusion devices, and improved husbandry practices--are an important component of these efforts, but, unfortunately, they are not feasible in all situations. This is particularly true out here in the West, where lethal methods are often the only practical way to resolve the problems.

Predation in the West

Quantifying and putting a dollar value on total losses to predation can be difficult. Therefore, to obtain estimates of the range and extent of wildlife damage across the country, we began contracting with the National Agricultural Statistics Service (NASS) in 1989. That year, NASS took a survey to assess total levels of wildlife damage experienced by farmers and ranchers across the country. Fifty-five percent of those surveyed reported experiencing wildlife damage. We contracted with NASS to conduct a similar survey again last year. The percentage of farmers and ranchers that reported experiencing wildlife damage was up to about 60 percent, and the dollar value of those damages was placed at $611 million--up $150 million from the previous survey.

In 1990 and 1994, we asked NASS to survey sheep and goat producers across the United States to determine the extent of wildlife predation on sheep. The results indicated that, nationwide, predators caused about $27.4 million in losses for the sheep and goat industries in 1990 and about $23.2 million in losses in 1994. Of all predators, coyotes were the main cause of losses.

In the 1994 survey, NASS asked each producer how much they spent on predator control. On average nationwide, producers spent $1.77 per breeding animal on nonlethal methods and $0.50 per breeding animal on lethal methods. By comparison, here in Wyoming, producers spent $2.92 per breeding animal on nonlethal protection and $1.57 per breeding animal on lethal protection.

Similar survey methods were used by NASS in 1992 to estimate the impact of wildlife predation to the cattle industry. Survey results indicated that predators cause about a $41.5 million annual loss to that industry, with coyotes responsible for about 59 percent or $24.3 million of the total loss.

Program Structure:

I'd like to talk briefly now about how the ADC program is structured to deal with these problems. First, I want to point out that Federal dollars are just one source of funding for ADC efforts. We enter into cooperative, cost-share agreements with States, counties, organizations, and even individual producers in areas where damage is occurring. Total Federal funding for operational or direct control is currently a little over $21 million, with an additional 9.7 million for ADC methods development; our cooperators nationwide contribute another $23 million in direct control activities. And I want to point out that cooperators have taken on an increasing share of the responsibility; just by means of comparison, in 1991, cooperator contributions for direct control totaled about $16.4 million.

Our program is divided into an eastern and a western region, and, as you can imagine, the problems and the solutions are very different in each. In the East, where a lot of the wildlife damage has been to field crops, aquaculture, and urban resources, the program has historically

focused on technical assistance. What this means is that our State offices provide advice and guidance on methods that producers and others can actually implement themselves. In many of these States, our cooperators--usually State or county governments--often pay 100-percent of the operational costs for ADC assistance.

But I would note that we are beginning to increase direct control activities in the East, as coyotes are increasingly causing the same kinds of damage as here in the Western States. We have new predator control projects in Ohio, Virginia, and West Virginia. In fact, West Virginia just became the first State east of the Mississippi to hold a registration for the Livestock Protection Collar.

Here in the West, our activities have traditionally been more hands-on, and our western region has received $15.8 million of the available $21 million in Federal funds for FY 1996. About $1 million goes to Wyoming, and cooperators--which include 17 of the 22 counties and the Wyoming Department of Fish and Game--contribute another $427,000. Needless to say, a coordinated approach to damage control and management by all affected interests and agencies is vitally important, and we have excellent relationships with the land management agencies in this part of the country.

Predation in Wyoming:

Although our ADC State office in Casper reports damage to crops, pasture, buildings, and even electrical utilities, most wildlife damage in this State relates to livestock. While many problems are caused by black bears, bobcats, red foxes, golden eagles, ravens, and turkey vultures, the overwhelming majority of predation is by coyotes. In 1994, we killed 5,302 coyotes to help stem that damage. I might add that private individuals killed another 5,088 coyotes.

When dealing with the level of damage experienced by producers here in Wyoming, nonlethal methods like guard dogs can help prevent some problems, but only in conjunction with actually reducing the number of damage-causing animals. The methods we use to remove damage-causing animals here in Wyoming and other parts of the West include trapping, shooting--including aerial hunting--denning, and the M-44 device. APHIS' goal is to solve animal damage problems by emphasizing a program mix that is both cost-effective and environmentally sensitive.

In 1994, the Wyoming Agricultural Statistics Service surveyed sheep producers to get a complete picture of predation problems. The results indicate that, in 1994, a total of 96,000 sheep and lambs (before docking) were lost to predation out of an estimated total population of 790,000. That's $4.3 million or 12 percent in losses to this State's sheep industry. And the survey indicated that 72 percent of those losses are attributable to coyotes.

Customer-Service

ADC began many years ago as a customer-service program, and we maintain that orientation today. To quantifiably assess the overall effectiveness of the service we provide, last year we conducted a nationwide customer service survey of those requesting assistance. We are very proud of the results, which include the following:

- -- 95.6 percent of the respondents agreed with the statement that, "ADC personnel made me feel that my wildlife problem was important."
- -- 94.9 percent agreed that, "ADC personnel knew what to do to solve or control my wildlife problem."
- -- 96.7 percent agreed that, "The service that ADC provides is useful."
- -- 94.1 percent believe that, "Without ADC"s help, the level of loss, damage, hazard, or nuisance would have increased."

Environmental Compliance

As I stated earlier, ADC is committed to stopping wildlife damage in a manner that is not only effective but also environmentally responsible. All of our activities are conducted in compliance with the National Environmental Policy Act, the Federal Insecticide, Fungicide, and Rodenticide Act, the Endangered Species Act, the Migratory Bird Treaty Act, and other Federal, State, and local laws and regulations.

Just about 2 years ago now, we completed a comprehensive Environmental Impact Statement (EIS) for our program as a whole. The EIS examined 13 alternatives and provided detailed analysis of 5 of them. It focused on the types of wildlife species affected, losses associated with wildlife damage, societal views or attitudes, and impacts on biological, economic, and physical aspects of the human environment. Because aspects of all 13 alternatives have been or could be used in ADC activities, depending upon the particular area or the specific nature of the damage problem, our final decision was to direct our local managers to consider any and all of the 13 alternatives as a possible approach.

Our goal is flexibility. We don't want to dictate which alternatives are the most appropriate for a given area; we leave that decisionmaking largely up to our managers in the field. These are the people who are in contact every day with our customers and are in the best position to identify appropriate and workable solutions.

Research

At this point I'd like to mention a very important component of the ADC program, and that is our laboratory, the Denver Wildlife Research Center. This laboratory has been in existence since the 1920's and is the only laboratory in the world devoted exclusively to the study of

wildlife damage control. We not only conduct our own research there, but we also contract with universities, non-profit research facilities, and other public and private entities. The goal is to make good use of state-of-the-art technology and the most modern advances to:

-- assess damage and other problems caused by wildlife;
-- investigate the biology and behavior of problem animals;
-- evaluate the impact of wildlife management practices on target species, nontarget species, and the environment;
-- develop and improve technology to reduce wildlife problems;
-- support registration of management chemicals and drugs; and
-- transfer scientific and technical information.

Much of DWRC's work focuses on identifying new control techniques and refining existing ones to make control efforts not only more effective but also more acceptable to the general public. Some of the folks here today from the ranching community may be familiar with one of the tools our researchers have developed, and that is the Electronic Guard. This is a siren-and-strobe frightening device that is being used as a component of an integrated approach to wildlife damage. We have done extensive studies in the past on the effectiveness of guard dogs and are now branching out to study the use of llamas and burros in protecting sheep from predators.

DWRC researchers are also continuing work--funded in part by the Texas Sheep and Goat Raisers Association--on the possible use of immunocontraceptives in coyotes. We are working on refinements on traps--including not only padded jaws but also remote monitoring technology that lets our specialists know when a trap has been sprung and tranquilizer tabs for animals that are trapped.

Conclusion:

I would like to thank the Subcommittee for bringing us together today to discuss ADC, and I hope my testimony has been helpful in giving you a sense of our commitment to providing good service. We would be happy to work with you to provide more detailed information if that will be helpful. And, of course, we'd be happy to answer any questions you may have now.

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STATEMENT OF

TRUMAN JULIAN

KEMMERER, WYOMING

PRESIDENT, WYOMING WOOL GROWERS ASSOCIATION

BEFORE

UNITED STATES HOUSE OF REPRESENTATIVES

SUBCOMMITTEE ON FISHERIES, WILDLIFE AND OCEANS

APRIL 10, 1996

GILLETTE, WYOMING

Mr. Chairman and members of the committee. I am Truman Julian, President of the Wyoming Wool Growers Association and the National Public Lands Council. I represent approximately one thousand active sheep producers in Wyoming and about 27,000 public land permittees nationally.

Since January of 1993, the sheep industry in Wyoming has lost over 500 active lamb and wool producers with a corresponding reduction of over 255,000 head of our producing ewe base. Nationally we lost approximately 2.5 million head of sheep or 22% from 1990 - 1995. Most have been sold for slaughter, most likely in Mexico.

To put this into economic terms, our national organization, the American Sheep Industry Association, estimates that every producing ewe in this country generates conservatively $600,00 in annual economic activity with the products she produces (lamb and wool) and she creates or maintains .031 jobs. What the loss of 255,000 head of producing animals in the State of Wyoming means to this state and to the American economy is a LOSS of $153 million in economic activity and over 7900 jobs. That economic activity and those jobs are now being picked up by our foreign competitors. You may notice, coincidentally, that the decline in both Wyoming sheep and producer numbers coincides with the passage of the act by Congress to eliminate the Wool Incentive program. This is not a coincidence, but I am here to tell you that the action Congress took in 1993 to eliminate the 50 year old Wool Program IS NOT

the only reason we have seen 33% of our producers and 32% of our production base leave the business, or the state.

Since the fall of 1993, the Executive Board of the Wyoming Wool Growers Association has conducted a series of town meetings throughout the state. These meetings have several functions, first of all to inform producers of the latest issues that are important to the sheep industry both at the state and national levels. These subjects have included such topics as the loss or elimination of the Wool Incentive Program and the more recent industry referendum to establish a lamb check-off system. In addition, these meetings are designed to gather input on the main concerns of Wyoming sheep producers and to attempt to address these concerns. In Wyoming, we not only attempt to keep our producers well informed of sheep industry issues, but try to work towards solving problems that plague our sheep producers.

Congresswomen Cubin and Committee members, guess what the sheep producers in Wyoming have indicated is their number one problem over the past three years? Yes, predators! I am not going to bore you with facts, figures and statistics, but instead have included them for the record and for your review in my written testimony. I might add though, that according to the Wyoming Agricultural Statistics Service, predators have cost sheep producers in Wyoming almost four million dollars annually over the past three years. This cost, plus the loss of the Wool

Act, which accounted for approximately 24 percent of the sheep producers income, have brought about the decline of the sheep industry in Wyoming and the West.

On our ranch (we are a family corporation), predators cost us directly over $30,000 per year, on the average. Losses have ranged from a high of 22% to a low of 10%, averaging about 15% yearly. This amounts to about $30,000 a year loss, depending on prices. The wool incentive amounted to 26% of our annual income. The combined value of these two losses amounts to about $180,000 per year, again depending on prices of lamb and wool.

On our operation, coyotes are the number one predator followed by fox, black bear, ravens, eagles, mountain lions and an occasional loss from badger and bobcats. Soon, perhaps as early as this summer, I will be facing the wolf. The wolf found dead near Daniel, Wyoming several months ago was only 50 miles north of our summer grazing allotments. It seems the wolves that the U.S. Fish and Wildlife Service transplanted into Yellowstone National Park are getting tired of elk and buffalo steak and are seeking greener pastures. I will address the wolf problem later in my testimony.

Let me assure you, Mr. Chairman and committee members, that despite what some environmental and animal rights activists groups would have you believe, we are not sitting on our backsides complaining about predators and doing nothing about the problem ourselves. Myself,

as well as almost all other sheep producers in Wyoming, have tried everything available to reduce predator losses. The following is what we have tried and are doing on our ranch. We have at one time or another used fire, fire crackers, repellents, predator ear tags, scare devices, sterilization, herding, sleeping with the herd, trapping, flying, M-44's and guard dogs. Some of these tools were worthless and expensive, while others were useful.

Last year, we spent over $5,000 in predator taxes, $4,500 for aerial gunning, over $2,000 for a private trapper, and over $4,500 for dog food and supplies, We furnished a horse for a trapper and provided horse feed and pasture. This adds up to approximately another $20,000 per year, which takes my overall predator cost to about $50,000 per year. It is because of added expenses such as these that is causing us to lose a wonderful industry in Wyoming and much of the West.

Committee members, lets go back to the wolf. As you are aware, wolves were introduced into Idaho and Yellowstone Park last winter. As you have probably heard they are not staying in the Park. I would like to present to you some facts presented by Elaine Allestad in testimony given before the United States Senate, Subcommittee on Park, Historic Preservation and Recreation on May 23, 1995.

I quote, "If it can be said the bald eagle represents the successes of the Endangered Species Act, then it can also be said that the wolf best represents the Endangered Species Act's failures and abuses. Foremost

among these abuses is the fact that the gray wolf is not in danger of extinction. Canadian biologists estimate there are between 45,000 and 60,000 wolves in Canada. Over two thousand gray wolves are found within the continental United States and another 7,000-10,000 gray wolves are found in Alaska. The wolf issue is not about recovery of a threatened species. Nor is this issue about biology. The wolf issue centers around regulatory control of natural resources. The issue also centers around the misguided policies of natural regulation.

The Eastern timber wolf recovery program has taken an enormous toll on the livestock industry, and agriculture in general, in northern Minnesota. According to USDA figures, there were 12,230 farms and 91,000 sheep in the Minnesota wolf range in 1979. By 1982, the number of farms in Minnesota wolf range declined 42 percent to 7,200 farms. By 1985 sheep numbers in Minnesota wolf range declined 82 percent to only 16,000 sheep. This decline in sheep numbers in wolf range occurred when sheep numbers in the rest of the state increased.

Between 1977 and 1986, an average of 234 domestic animals were verified as lost to wolves in Minnesota. From 1987 to 1990 this annual average increased to 1150 domestic animals, five times the number lost during the previous period. The year 1989 was extremely bad for predation with 1,734 confirmed livestock losses. The state of Minnesota compensated livestock producers $43,644 for their losses to wolves, but by February 1990 the compensation program was broke. The federal

government and organizations such as the National Wildlife Federation did not provide additional funds to the compensation program and many producers had to wait until the next fiscal year to receive payment. Since 1989, wolf predation levels have remianed high.

In 1992, the U.S. Fish and Wildlife Service issued a report entitled "Trends and Management of Wolf / Livestock Conflict in Minnisota." In earlier reports, USFWS analysts found that livestock predation was statistically insignificant. However, heavy wolf predation losses in 1987, 1989 and 1990 forced the USFWS to modify earlier conclusions. USFWS's updated data concluded that livestock losses increased with time and distribution. The USFWS report suggested that preventative wolf control measures be taken in Minnesota. The report also states that up to 30 percent of the Minnesota wolf population will have to be taken annually to prevent increased conflict. The USFWS has not taken action on this report and is unlikely to do so considering the environmental communities uproar created during Alaska's wolf control efforts. Most disturbing is the report's conclusion that because factors in Minnesota are different than in the West, the West can expect even heavier livestock losses than those experienced in Minnesota."

In a recent conversation with the USFWS concerning wolves, I asked whether our existing predator management program in livestock areas outside the Park would be affected if wolves decided to look for greener pastures. I was told, "Yes". Currently, county predatory animal trappers,

private animal damage control and ADC use the following tools to manage predators. Devices such as snares, traps, calls and aerial gunning are used as well as denning and M-44's. Not any one of these tools is effective on their own, a combination is needed to assure effective control of predators. I was told by USFWS that if a wolf showed up outside the Park , for example in my area which is about 100 miles south of Yellowstone, that M-44's and snares would definitely be affected and probably leg-hold traps and possibly aerial hunting. Tell me, Committee members, what methods of management do we have left? What am I and other livestock operators to do but go out of business. Can we not learn something from Minnesota?

My Grandfather immigrated from England and started our ranch in the 1880's. My children are the fourth generation of Julians engaged in the sheep ranching business in Southwestern Wyoming. My father is still alive, so counting my two new grandchildren, this original old sheep ranch is being worked and is supporting four generations of Julians. It is my will and desire to have a Julian sheep ranch for another 116 years. The big question, is will the U.S. Government allow us to survive?

Look at the Grizzly bear in Wyoming. They have reached their population objective to be delisted. Have they been? The answer is No! The grizzly is costing the State of Wyoming thousands of dollars a year for depredation losses. The Wyoming Game and Fish Department wants to delist them and be allowed to hunt bears that are harmful to humans and

depredate on domestic livestock. This makes good sense to me but does it to the USFWS? Why of course not, it is too practical.

Mr. Chairman and Committee members, I rest my case. Please give the testimony I have given here today serious consideration and analyze the data I have presented in writing. If the sheep industry is to survive in Wyoming and much of the West, we need your help. The laws that were passed such as the T&E Species Act whose intent was well founded and meaningful, are now being used by some Government agencies and this Administration to beat up and drive it's own citizens out of business.

Thank you for your time, consideration and the opportunity to give testimony.

[Additional material supplied by Truman Julian was placed in Subcommittee files.]

U.S. House of Representatives

Committee on Resources
Subcommittee on Fisheries, Wildlife and Oceans

April 10, 1996
Gillette, Wyoming

Testimony by

Cindy Garretson-Weibel, Executive Director

Wyoming Stock Growers Association

Mr. Saxton, Members of the Committee:

I appreciate the opportunity to testify before you today regarding predator control or the lack thereof. My name is Cindy Garretson-Weibel and I am the executive director for the Wyoming Stock Growers Association. Our office is located in Cheyenne and the Wyoming Stock Growers Association is the oldest non-governmental organization in the state. We are a membership organization and represent over 1,600 ranching families in Wyoming.

Definition of Predators

As we begin to discuss predators today, I would first like to point out that predatory animals, according to Wyoming statute, include coyote, jackrabbit, porcupine, raccoon, red fox, wolf, skunk or stray cat. However, other wildlife, including bobcats, mountain lions, grizzly bears, black bears, and even raptors cause depredation on other wildlife species, as well as livestock, though they do not fall under Wyoming's statutory definition of predator. Some of the predacious species are protected as threatened or endangered species, as well, thus adding to the difficulty in providing an effective predator control program.

Basically, what this means from a practical aspect is that furbearers (such as bobcats) and trophy game animals (black bear, grizzly bear, mountain lion) that cause predation cannot be controlled by private landowners, and, in general, may only be taken by hunters or trappers possessing a license from the Wyoming Game and Fish Department. Predatory animals, as defined by statute, may be taken without a license. Though predation does occur by other species, my primary focus today will be on the coyote.

Livestock Predation

Though much of the predation by coyotes is on the domestic sheep

population, predation on cattle is also common; however, the statistics are not as readily available on cattle predation. Depredation losses have also been confirmed on horses. If you have ever seen a fresh kill by predators on sheep, cattle or wildlife, you understand the emotional debate involved with predators. For those of you who have not had the misfortune of witnessing such a gruesome act, I have attached to my comments an article that appeared in the National Wool Grower magazine in 1980 entitled "How Coyotes Kill Sheep."

I could describe countless stories of depredation, but today I want to focus more on the common sense need for predator control, rather than on emotions. The fact is that Wyoming sheep producers lost 66,000 sheep and lambs to predators in 1995. Coyotes were the main predator, contributing to 73 percent of the total predator losses, and accounting for 40 percent of all sheep losses for the year. This predation translated to a $3.5 million loss to the industry.

It is noteworthy to point out that livestock producers receive no compensation for depredation of livestock caused by coyotes and other predatory animals. In addition, ranchers in Wyoming are paying for predator control. From July 1, 1994 - December 31, 1995, livestock producers contributed approximately $900,000 to predator control through payment of mandatory predator fee collected when livestock are shipped or a change of ownership occurs. This predator control benefits the wildlife populations, as well.

Wildlife Predation

In addition to the loss of livestock to predators, our association is deeply concerned about the loss of wildlife to predators. Now, with the introduction of the wolf into Yellowstone National Park, an even greater impact will be seen on the wildlife populations. Landowners, who support the wildlife populations on their deeded land for a good portion of the year, can attest to the reality that antelope and deer populations, as well as bird populations to name a few, have been adversely affected by predators. Wyoming is well-known for its pristine beauty and abundant wildlife and

we want to see these healthy wildlife populations remain.

If wildlife populations continue to decline, the state's wildlife agency could face a loss in revenue due to a reduction in license allocation. The timing would not be particularly good, especially since the department requested from the Legislature a license fee increase just a few months ago. In addition, in 1993, the Wyoming Game and Fish Department estimated that nonconsumptive users (backpackers, photographers, etc.) spent over $282,809,875 throughout the state. If the wildlife populations continue to decline, the economy of the entire state will obviously be affected.

Solutions

I have outlined some of the problems associated with predators and predator control, but what are the solutions?

Before the predator problem can be adequately addressed, wildlife agencies must admit that a predator problem exists. I believe that state wildlife agencies have soft-peddled the predator problem, by contributing decreases in wildlife population almost solely to severe winters, drought, and loss of habitat. Agencies need to quit overlooking the obvious. The obvious is that predators have contributed to the declining wildlife populations and they can no longer be ignored in the management equation.

In addition, more involvement and participation on the part of the federal government with the state is imperative to effectively control predators. The federal government needs to be an active partner in predator control programs, but state predator control personnel are more suited to administer an efficient program because they are closest to the problem. In fact, we would not be adverse to investigating turning the predator control programs over to the states.

Research efforts need to be continued in order to develop management and control practices that are socially acceptable. With the loss of 1080 in the 1970s, the ability to effectively control predators has decreased. We

need some effective control method to replace what management tools have been lost.

It is vitally important that further restrictions are not be placed on present control methods. For example, the use of M44s on federal lands, as well as aerial hunting must be maintained if predator control efforts are to be successful. As you may already be aware, the land pattern in Wyoming and other western states is comprised of private, state and federal ownership. Predator control methods on federal lands are more restrictive than those on state and private lands, which makes it very difficult to tackle the predator problem as a whole.

What we do not need are more unwieldy rules and regulations. The Honorable Dick Cheney, R-Wyoming, in 1979, when serving in the House of Representatives wrote about President Ford: "He has spent considerable time reviewing the problem (and it is a problem) of livestock losses due to coyotes and other predators. He had decided certain changes were needed in the executive order to provide more latitude in controlling predators. The changes were ordered, only to be followed by pages and pages of new rules and regulations from the Environmental Protection Agency which had the effect of making the problem worse than it was before." The same holds true today, we do not need more rules and regulations, we need more common sense.

Summary

What do ranchers want? We want protection from devastating predator losses and we want to maintain a healthy wildlife population. That is all we want, and I am relatively certain others want the same. All we desire is to maintain our way of life and . . . "a home, where the buffalo roam, and the deer and the antelope play. Where seldom is heard a discouraging word, and the skies are not cloudy all day."

Thank you ladies and gentlemen for allowing me an opportunity to comment. I will be happy to answer any questions you may have.

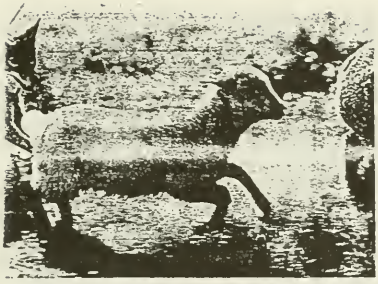

Photo 1. In our tests, any sheep which ran from coyotes usually were pursued and attacked. Coyotes generally select lambs over ewes if they have a choice.

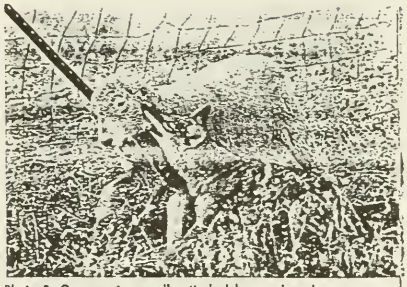

Photo 2. Our coyotes usually attacked by running alongside fleeing sheep and biting them behind and below the ear. Then they braced their feet to stop the sheep from running. In this picture two 2-year-old coyotes are attacking a 90 lb. ewe.

Cover story

How Coyotes Kill Sheep

By Robert M. Timm and
Guy E. Connolly

COYOTE PREDATION is a serious problem for many sheep ranchers in North Ameica, but the act of predation is seldom witnessed under range conditions. Therefore, the sheep-killing behavior of wild coyotes has received little study. In experiments with captive animals, we obtained photographs which illustrate what we believe to be the usual mode of coyote attack on sheep. The resulting wounds are characteristic of coyote predation, even though dogs or other predators may sometime inflict similar wounds.

Photo 5. The throat attack pattern of coyotes leaves characteristic lesions which may or may not be externally visible. This coyote-killed ewe showed few external wounds, but sub-cutaneous examination revealed extensive tissue damage and hemorrhaging in the larynx region. Tooth punctures can often be found in the overlying skin.

The 12 coyotes used in this study were either captured as pups or born in captivity. At the time of these trials, eight of the animals were 2 years old and four were yearlings; none had had previous hunting or prey-killing experience. Nevertheless, five of these coyotes killed and fed upon lambs at the first opportunity. Three more coyotes, which did not attack sheep

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Robert M. Timm is currently Extension wildlife specialist, University of Nebraska, Lincoln; and Guy E. Connolly is wildlife research biologist, U.S. Fish and Wildlife Service, Wildlife Research Station, Twin Falls, Idaho. The research was done when both authors were at the University of California, Davis. The report is a contribution of Western Regional Research Project W-123, "Evaluating Management of Predators in Relation to Domestic Animals". The work was supported in part by the USDA, Agricultural Research Service, Western Regional Laboratory. The authors thank D. A. Wade, W. E. Howard, W. M. Longhurst, R. Teranishi, and E. Murphy for advice and support; A. H. Murphy, D. T. Torell, and A. Hulbert for sheep; M. Vann and C. Berry for coyote pups; J. Fammatre for assistance; and M. Bezucage for photograph number 4. Reprinted from RANGEMAN'S JOURNAL, August 1977, by permission of the Society of Range Management.

Photo 3. As soon as the coyotes arrested the flight of the sheep, they shifted their bite toward the sheep's throat. Once a firm grip was secured in the larynx region, the coyote simply held on and waited for the sheep to succumb. This manner of attack appeared to cause death primarily by suffocation, although blood loss and severe tissue damage also occurred. The time from onset of attack to death of the sheep or beginning of feeding, which ever occurred first, averaged 13 minutes. In 24 of the 25 fatal attacks, the neck and throat region was the main point of attack.

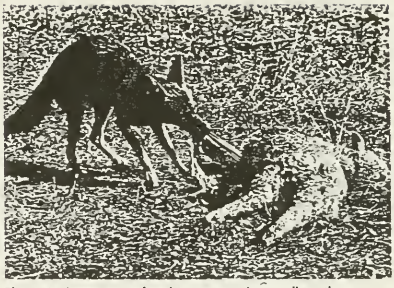

Photo 4. As soon as the sheep stopped struggling, the coyote(s) began feeding. On 9 of 21 kills where feeding was observed, the coyotes entered the body cavity and ate intestines and other viscera. They also fed upon the rump or hind leg (10 cases), the neck (7), front leg and shoulder (7), head (6), and other sites. On the average, each coyote fed for 25 minutes and ate about 4 pounds. Coyotes fed just before tests killed sheep but did not feed on them.

at first, did so in later tests. Of the 11 coyotes which were tested singly against individual 30 to 70-lb. lambs, eight killed the lambs.

In our tests, one to four coyotes were released into a 0.4-acre pen with 1 to 6 sheep, usually for 2 to 5 hours. The coyotes killed one or more sheep in 22 of the 46 tests. For the tests in which a fatal attack occurred, the time from release of coyotes to onset of attack varied from 1 to 154 minutes, with an average of 47 minutes. Of the coyotes tested individually with single lambs, the dominant animals (2-year-old males and the females paired with them) attacked most frequently. Yearling males attacked less frequently, and the two unpaired females did not attack sheep.

While we cannot be sure that wild coyotes will sheep in exactly the manner we observed with captive animals, the wounds resulting from our tests resembled those reported by many workers who studied coyote predation under range conditions. Therefore, we believe that the killing patterns we saw are generally representative of coyote predation on sheep.

On ranges where mountain lion, black bear, and bobcat predation is improbable, tissue damage, tooth marks, and hemorrhage in the larynx region on sheep carcesses is commonly indicative of coyote predation. However, coyotes sometimes attack the hindquarters of sheep. Dog-inflicted wounds seem to be more variable than those caused by coyotes. It is reported that dogs tend to attack the hindquarters, flanks, head, and/or abdomen of the sheep and seldom kill as cleanly as do coyotes. Wounds caused by dogs can usually be recognized as such, but at times they are indistinguishable from those made by coyotes. In such cases, tracks and other evidence at the scene often indicate which species of predator caused the damage.

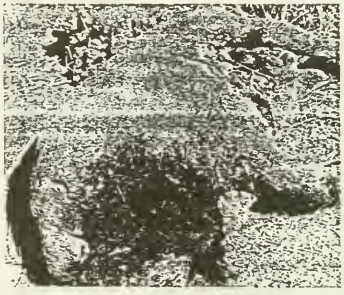

Photo 6. A coyote consumed about 5 pounds from the rump of this 70 lb. lamb without killing it. We have seen range sheep with similar wounds. Of 25 coyote kills we observed, this was the only case in which the attack was not directed primarily to the neck and throat area of the sheep. Extensive feeding on the rump and hind leg, as shown here, also occurred on about half of the sheep killed with the customary throat hold.

U.S. House of Representatives

Committee on Resources
Subcommittee on Fisheries, Wildlife and Oceans

April 10, 1996
Gillette, Wyoming

Testimony by:

Larry J. Bourret, Executive Vice President
Wyoming Farm Bureau Federation

I am Larry J. Bourret, Executive Vice President of the Wyoming Farm Bureau Federation. 406 South 21st Street. Laramie. Wyoming 82070. We thank you for the opportunity to explain the problems and propose solution to this situation.

From 1971 to 1981 I was employed by the Wyoming Department of Agriculture. In 1972 when the registrations for predator toxicants were canceled by EPA I was assigned to work on establishing a responsible, effective predator control program in Wyoming. We worked with the U.S. Bureau of Sports Fisheries and Wildlife (the predecessor to the U.S. Fish and Wildlife Service) and the 23 county predatory animal control districts in Wyoming.

The Wyoming Legislature, in 1973, amended the laws and appropriated about $250,000 for the program. This was not the first time the Wyoming Legislature had dealt with predatory animals. In 1875 the first bounty law was enacted when Wyoming was still a territory. From 1910 into the 1940s the Legislature appropriated funds to be used by the U.S. Biological Survey (the predecessor to the U.S. Bureau of Sports Fisheries and Wildlife) for predator control. A review of Wyoming laws reveals hunters were issued strychnine for predator control along with their hunting license in the late 1800s. Research was conducted on thallium and coyote getters in Wyoming beginning in 1937. Coyote getters were used operationally in Wyoming beginning in 1940, with thallium being used operationally in 1943. In 1944 1080 (sodium monofluoroacetate) was used operationally in Wyoming in 1946. Because strychnine, coyote getters, thallium and 1080 were used before 1948, in Wyoming, any use of the years prior to that time, as baseline years, to determine the efficacy of 1080 would be inappropriate. The research on 1080 indicated it reduced losses by 85-100 percent.

In 1971 thallium-killed eagles and eagles killed from aircraft were found in Wyoming and Colorado. A number of environmental groups filed two lawsuits to halt the entire predator control program. An advisory committee (Cain Committee) was established. The environmental groups petitioned EPA to cancel the registrations of the toxicants, although the federal pesticide law did not provide for such a petition. The Interior Department prepared for a defense of the lawsuit and filed sworn affidavits saying there was no environmental damage from the predator control program. An EIS was prepared by Interior and on July 22, 1971 the Assistant Secretary of Interior for Fish and Wildlife and Parks signed off on the EIS, which said there was no problem with the program. However, in October the EIS process was terminated. The Cain Committee, in October, 1971, transmitted their report to the Secretary of Interior and the Chairman of the Council on Environmental Quality. A sealed, secret stipulation, signed by an Interior lawyer and an environmental group lawyer, was filed in district court in Washington, D.C. indicating the Cain Report was being drafted and that Interior would use said report to discontinue the use of toxicants in the federal predator control program. Interior continued to oppose the lawsuits. On February 8, 1972 President Nixon issued an executive Order prohibiting use of toxicants on federal lands and in federal programs. One month later EPA canceled the registrations of cyanide, 1080 and strychnine.

In May of 1972 the Administrator of EPA told the Wyoming Commissioner of Agriculture and the President of the Wyoming WoolGrowers Assn. that amendments being proposed to the federal pesticide law would allow for re-registration of 1080, strychnine and cyanide. Those amendments were adopted in October, 1972. In April of 1973 the Wyoming Department of Agriculture requested registration of 1080, strychnine and cyanide. In September the same department requested emergency use permits for the same pesticides. In March of 1974 the State of Wyoming, the Wyoming WoolGrowers Assn., Wyoming StockGrowers Assn., Wyoming Farm Bureau and others filed suit. In 1975 the Wyoming Department of Agriculture filed intrastate registrations with EPA. Over the years many registration requests and emergency requests have been filed with EPA. A few emergency requests for rabies control were approved. EPA registered the M-44 in 1974, and toxic collars in the mid-1980s, but the restrictions on their use render them almost a useless exercise. The Wyoming Department of Agriculture, in about 1976, obtained internal memos, dated in November, 1972, from within EPA. One of the documents, to Mr. David Dominick, refers to a request by Dominick of November 15, 1972. Edwin L. Johnson signed the memo and lays out "the most likely scenario for reregistering a predator control chemical". Another memo dated November 20, 1972 reveals the Acting Director, Division of Registrations, was requested, by the Acting Deputy Assistant Administrator Edwin L. Johnson, to initiate a review, by November 27, of which chemical (predator pesticide) would most likely be able to be registered. The third memo, dated November 27, 1972 to Mr. Johnson from Douglas D. Campt, Acting Director, refers to Johnson's November 20, 1972 memo. Campt's memo includes the following:

"RECOMMENDATIONS AND ALTERNATIVES
We consider the following four choices listed below the only viable alternatives. Each subsequent alternative is less desirable than the preceding one. Under each possibility there is set forth a brief statement as to pertinent regulations and necessary labeling.

1. We recommend that (A) strychnine products be registered for predator control use nationwide, and (B) sodium fluoroacetate and cyanide products be registered for coyote, fox, and feral dog control for use use west of the 100th meridian provided regulations be specified as follows:
   1. The most selective product should be used to accomplish the predator control needed. This can best be accomplished considering the local situation. A "Use Permit System" requirement will assure the most effective control.
   2. Method of use must be clearly prescribed. (Use should be permitted only when there is a demonstrated need and should be restricted to the product which can accomplish the objective with the least adverse environmental effect).
   3. A Field Biologist should be responsible for prescribing, supervising and

monitoring any use of predicides.
4. Routine applications must be avoided and use should be limited to situations of real need.
5. All cases of adverse effects should be investigated thoroughly and on a timely basis.
6. When monitoring indicates populations of the target species are under control, the predator control operations should cease.

The labeling should reflect the restrictions set forth in the regulations and state the penalty for misuse.

II. Our second choice would be essentially the same as No. I except that 1080 is deleted. (The regulations and labeling are the same as No. I above.)

III. Our third choice would call for the deletion of both 1080 and the cyanide coyote getter and leave strychnine as the only toxicant. (The regulations and labeling are the same as No. I above except there is no choice of toxicant to be considered)."

III. The fourth and least desirable choice is the registration of the coyote getter (M-44) if possible. This choice may not be desirable since it could not be used east of the 100 meridian where human population is dense, thereby being too hazardous to humans. (The regulations and labeling are the same as No. III above.)

Campt indicated the EPA findings and recommendations were based on the data available and the expertise of "Wildlife Biologist, Toxicologist and Vertebrate Animal Biologist in both the Registration and Criteria and Evaluation Divisions." He went on to say,

> "There is little doubt that we can expect some adverse public reaction to the re-registration of any of the predator control products. We have, however, consistently stated that the new legislation, with the restricted use provisions, would allow us to permit use of certain products that would be disallowed without new legislation."

That statement indicates the EPA Administrator's promise to the Wyoming Commissioner of Agriculture and officials of the Wyoming WoolGrowers Association precipitated the November, 1972 memos. The EPA didn't keep its word, and the October, 1972 "restricted use" amendments to the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) have been of no value to the livestock industry. The M-44 was registered with 22 restrictions on its use -- those restrictions being so burdensome that the M-44 is practically useless. That is apparently exactly as the radical environmental community wanted, and the federal government is doing their bidding.

You will hear that predators are not a problem to wildlife -- but you should not take that statement as proof, but instead should demand proof to support such statements. We are

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providing copies of "PREDATOR DAMAGE IN THE WEST: A STUDY OF COYOTE MANAGEMENT ALTERNATIVES", Prepared by U.S. Fish and Wildlife Service, Department of the Interior, December, 1978, which contains Table 1 which "summarizes studies that have found predators have a limiting or regulating effect on ungulate populations." We take exception to the statement on page 143 which indicates "Table 2 summarizes studies coming to an opposite conclusion", because the studies in Table 2 fail to show that predators increased the number of ungulates.

The Cain Committee, in 1972, recommended that,

> "... concommitant with the prohibition of the use of toxicants for predator control, there should be compensatory federal efforts along several lines, including: (1) increased funding in support of selective aerial gunning of coyotes; (2) establishment in each state of a trapper-instructor extension program through which landowners or their employees could receive training in legal and humane methods of predator control; (3) the adoption of an insurance program which would cover heavy livestock losses from all causes without requiring the validation of predator depredations; this program could be federal, federal-state, or commercially operated with participating public funds; and (4) an expansion of fact-finding and research on more effective and economical control methods."

Twenty-four years later we find the funding of aerial hunting to still be inadequate and that increased restrictions on that method have severely restricted the effectiveness. No western state has adopted the trapper instructor extension program probably because F. Robert Henderson, one of the major proponents, admitted in a September 27, 1978 letter to Norinda Burbidge the following:

> "I dislike anyone making a straight recommendation to adopt the Kansas program to another area without giving the matter considerable thought and study. What I said in 1973 may not still be true today. As we go through life, we learn a little each day and added to that situations change. The U.S. Fish and Wildlife Service who you disagree with has changed. They are a much more professionalized organization now. I'm not as sure today as I was ten years ago that they were wrong in many things they did. So, I'll ask you please do not indicate to others that what the people of Kansas have they to (sic) should have in your state, it may not work."

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An insurance program proposal was merely used by the Cain Committee to ignore the problem with predation and was never seriously considered. What has research provided, which has reduced losses to predators, during these 24 years? The M-44 was in use before 1972, as was the toxic collar so those two cannot be claimed as victories for research. Tens of millions of dollars have been expended on research and no progress has been made. Nathanial P. Reed, Assistant Secretary of Interior for Fish and Wildlife and Parks testified to the House Subcommittee on Fisheries and Wildlife Conservation and the Environment of the Committee on Merchant Marine and Fisheries, on March 19, 1973 that Secretary Morton, "In recognition of the need to prevent a disruption of the necessary damage control services while waiting for a new mandate from Congress" had set up a special accelerated program in April, 1972. That program included relying "heavily on helicopters and fixed-wing aircraft; trapping, calling and denning" and was aimed "at controlling specific groups of animals causing wholesale damage." He referred to a program on the Bridger National Forest in Wyoming and claimed this "demonstrated beyond any doubt that effective predator control can be carried out without poisons." He went on to say, "While it is presently more expensive to do it this way, I am convinced that a strong research effort will come up in the long-term with methods that are better and cheaper." He said, "Mr Chairman, the operational lessons which we have learned this past summer are applicable on a broad scale to future programs. We now know that selective and environmentally safe management methods, with appropriate funding and manpower, can be used effectively to control animal damage." (emphasis added). He said it would not be possible to provide a program such as the Bridger National Forest program to the West as a whole. He referred to research on attractants, tranquilizer drugs, behavior modifying drugs, diseases and adversives, but 24 years later no progress has been reported.

The facts are that the government took away effective, efficient environmentally safe methods 24 years ago, while making promises, and has done nothing since then except place additional restrictions on the remaining methods. An additional set of problems has been handed to the livestock industry now that wolf introduction has taken place. The U.S. Department of Interior, in the Final Environmental Impact Statement (FEIS) Reintroduction of Gray Wolves to Yellowstone National Park and Central Idaho", April, 1994 said on page 2-16 the following:

> "Some predator control activities (almost exclusively M-44 use for coyote control)by ADC would be affected by wolf recolonization. The current EPA registration restricts use of predator toxicants in areas occupied by listed species. Toxicants are already precluded from most areas where wolf recovery would be encouraged because of existing conditions. Other predator control activities (aerial and ground shooting, foot-hold trapping, snaring with modified snares, and denning) would not be affected. Wolves taken in the course of these activities must be immediately reported to authorities. If

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> wolves are killed through the course of these activities such incidents will be thoroughly investigated, and unavoidable or unintentional take of wolves (killing or injuring) during legal activities (trapping, vehicle collisions, etc.) would not be considered take. Such incidents must be reported as soon as possible but no later than 24 hours after the incident. Other take of wolves will be referred to the appropriate authorities for investigation and possible prosecution."

The livestock producers are now being told that aerial shooting, trapping and snares will be prohibited in the area where wolves may occur. Such prohibition is in direct conflict with the two-year old FEIS produced by the federal government. That FEIS indicated incidental take from trapping, and we assume aerial shooting and snaring, would not be considered "take" as defined in the Glossary (page 6-7) of the FEIS as follows:

> "Take -- The ESA defines 'take" as: To harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct. See above definition of Harass which includes definition of permitted harassment and pursuing, and see definition of Unavoidable and Unintentional Take below."

On page 6-8 of the Glossary of the same FEIS we find the following definition:

> "Unavoidable and Unintentional Take -- Accidental, non-negligent take (see above definition of take) which occurs despite reasonable care, is incidental to otherwise lawful activity and without the intent to do so. Examples would include striking a wolf with an automobile, capturing a wolf in a trap set obviously for another species. NOTE: Shooting a wolf when the individual states they believed it to be an animal other than a wolf, does <u>not</u> qualify as unavoidable or unintentional take. This is consistent with most state laws where killing of wild animals or domestic animals because of mistaken identity is illegal. Shooters have the responsibility to be sure of their targets."

Page 6-3 of the Glossary of the FEIS says the following:

> "Incidental Take --(see below for full definition of 'take' for this EIS) The taking (killing, wounding, maiming, injuring, or physically harming) of wolves, under permit or conditions established by the FWS in an experimental population rule, that occurs accidently or despite reasonable care during otherwise legal activities (e.g., as the result of legal activities and in conjunction with ADC control activities for other species). Within an experimental population area all wolves taken under the conditions permitted

> by the experimental population rule by agencies or the public will not be considered take under the Endangered Species Act. Any and all wolves taken outside the provisions of the experimental population rule would be considered take under the Endangered Species Act."

The experimental rule, published November 22, 1994 in the Federal Register says the following:

> "Section 1784(3) No person may take this species in the wild in an experimental population area except as provided in paragraphs (1), (3), (7), and (8) of this section:"

Section (1) refers to livestock producers on their private land taking a wolf in the act of killing, wounding, or biting livestock. Section (3) deals with livestock producers on public lands being required to have a permit to take a wolf in the act of killing, wounding or biting livestock. Section (7) indicates the FWS or designated agencies may take 'problem wolves" Section (8) reads as follows:

> "Any person may take a gray wolf found in an area defined in paragraph (i)(7), Provided that the take is incidental to otherwise lawful activity, accidental, unavoidable, unintentional, not resulting from negligent conduct lacking reasonable due care, and due care was exercised to avoid taking a gray wolf. Such taking is to be reported within 24 hours to a Service or Service-designated authority. Take that does not conform with such provisions may be referred to the appropriate authorities for prosecution."

Appendix 6 of the FEIS which is titled, "WOLF REINTRODUCTION INTO YELLOWSTONE NATIONAL PARK AND CENTRAL IDAHO AND EXECUTIVE ORDER 12630 (GOVERNMENT ACTIONS AND INTERFERENCE WITH CONSTITUTIONALLY PROTECTED PROPERTY RIGHTS)" reads, in part, as follows:

> "Private property will not be affected by land-use restrictions because of wolf recovery."

Therefore it would appear that the federal government is over-stepping its authority, and once again breaking its word, if restrictions are placed on animal damage control efforts which involve aerial shooting, trapping and snares in the portions of the States of Wyoming, Montana and Idaho which are within the designated "experimental population" areas. The government cannot continue to lie to the citizens. We request that the Subcommittee clarify this situation and advise the affected livestock producers of what they have learned from the Administration on whether their word is their bond, or if they are merely another set of liars.

Any further restrictions placed on animal damage control activities, whether because of wolves or for any other reason will further damage private property. We already know that animal damage control activity costs less than the damage it prevents, even with the many inappropriate restrictions placed on the program. Because the federal government can easily restrict animal damage control activity if it is a federal program we suggest that the Subcommittee investigate other alternatives to a federal program. One of those alternatives would be to provide the states the authority, with federal funding to operate the program. Another possible alternative, and perhaps an adjunct to the previous alternative, would be to use Dingell-Johnson funds in the states to reimburse livestock producers for their losses to predatory animals. Those funds are appropriated for use in providing habitat, and if lambs and calves are the habitat for predatory animals, it appears compensation would be a legal use of those funds. We request the Subcommittee make such a determination and advise the livestock producers who are suffering the losses as to their findings.

When one analyzes this problem, or most any type of problem, it is relatively easy to determine that there is a difference between "authority" and "responsibility". Those who have the responsibility to protect domestic livestock should also be provided the authority to provide that protection. Those who do not have the responsibility should not have the authority to restrict those who do have the responsibility. The federal government has proven it is not up to the task, that it will not keep a promise and that it shirks responsibility whenever possible.

Thank you for the opportunity to comment.

RECOMMENDATIONS AND ALTERNATIVES:

We consider the following four choices listed below the only viable alternatives. Each subsequent alternative is less desirable than the preceding one. Under each possibility there is set forth a brief statement as to pertinent regulations and necessary labeling.

I. We recommend that (A) strychnine products be registered for predator control use nationwide, and (B) sodium fluoroacetate and cyanide products be registered for coyote, fox, and feral dog control for use west of the 100th meridian provided regulations be specified as follows:

1. The most selective product should be used to accomplish the predator control needed. This can best be accomplished considering the local situation. A "Use Permit System" requirement will assure the most effective control.

2. Method of use must be clearly prescribed. (Use should be permitted only when there is a demonstrated need and should be restricted to the product which can accomplish the objective with the least adverse environmental effect).

3. A Field Biologist should be responsible for prescribing, supervising and monitoring any use of predacides.

4. Routine applications must be avoided and use should be limited to situations of real need.

5. All cases of adverse effects should be investigated thoroughly and on a timely basis.

6. When monitoring indicates populations of the target species are under control, the predator control operations should cease.

The labeling should reflect the limitations set forth in the regulations and state the penalties for misuse.

II. Our second choice would be essentially the same as No. I except that 1080 is deleted. (The regulations and labeling are the same as No. I above).

III. Our third choice would call for the deletion of both 1080 and the cyanide coyote getter and leave strychnine as the only toxicant. (The regulations and labeling are the same as No. I above except there is no choice of toxicant to be considered).

We have initiated planning with respect to restrictions and specific labeling that would be required. Mr. David Bowen and Mr. Herbert Harrison will be working to prepare the Registration Division's input into the necessary regulations. I would assume that these should be coordinated through the Task Force on Regulations.

Douglas D. Campt
Acting Director

Enclosures

cc:
H.S. Harrison
Dr. W. H. Preston
Dr. William Murray

File, re Predators

WASHINGTON, D.C. 20250

Registration Division

11-27-72

Possible Re-Registration of Predator Control Products

7-9-10

Edwin L. Johnson
Acting Deputy Assistant Administrator
for Pesticides Programs

As requested in your memorandum of November 20, 1972, we have reviewed the several available alternatives and submit herewith our findings and recommendations.

Since this matter required an appraisal of risks/benefits and criteria for registration, we have involved personnel from the Criteria and Evaluation Division in this review. After many hours of discussion and analysis of available data on predator control products, we must admit that there is currently not enough "hard" data to solidly support any position we might take. The complexities involved and the emotionalism on this issue serve to exacerbate the problem. Our findings and recommendations are based on the data available and the expertise of Wildlife Biologist, Toxicologist and Vertebrate Animal Biologist in both the Registration and Criteria and Evaluation Divisions.

We are acutely aware of the difficult decisions which must be made on this issue and have attempted to provide, within the allowed time frame, our best objective analysis on the matter. We have not considered possible public reaction in our deliberations, however, we realize that this factor must be considered in the total picture.

There is little doubt that we can expect some adverse public reaction to the re-registration of any of the predator control products. We have, however, consistently stated that the new legislation, with the restricted use provisions, would allow us to permit use of certain products that would be disallowed without new legislation.

In an attempt to illustrate the risk/benefit ratio in readily understandabl terms, we have prepared three charts that compare the four previously registered predacides against one another from the standpoint of (1) risk to humans and wildlife, (2) risk to endangered species and (3) usefulness under various use conditions. Immediately following the charts, we have set forth the reasoning upon which we have based our recommendations and suggested alternatives. These recommendations include a brief statement regarding possible labeling and regulations.

IV. The fourth and least desirable choice is the registration of the coyote getter (M-44 if possible). This choice may not be desirable since it could not be used east of the 100th meridian where human population is dense, thereby being too hazardous to humans. (The regulations and labeling are the same as No. III above).

To: Subcommittee on Fisheries,
Wildlife & Oceans
Committee on Resources
U S House of Representatives
H1-805 O'Neill House Office Building
Washington, D.C. 20515

From: Terry Schramm
Cowboy
Walton Ranch
Star Route 325
Jackson, WY 83001

Date. April 5, 1996

My name is Terry Schramm. I've been the cowboy on the Blackrock Spread Creek allotment for 16 years. The Walton Ranch and the Moulton Ranch are the permittee. We have been a responsible, legitimate user of the forest allotment for 75 years. As in much of the West, Teton County is 97% federally owned and without this grazing permit we would not have a viable ranching operation as private land is unavailable for pasturing our cattle.

For the past three summers our ranching operation has suffered substantial losses due to grizzly bear predation; fifty-two confirmed bear kills and 66 calves unaccounted for. One hundred ninety-two (192) calves or 9% of our calf crop have been lost in the last three years. Historical losses averaged 2-3%.

We have been paid some compensation but have had to fight for every penny, as all compensation comes from the State of Wyoming and the State doesn't want to get into a protracted compensation program for an animal for which they have few management options.

However, while we have been paid some compensation, it remains hopelessly inadequate as all kills are impossible to find. Nobody is taking into account the hundreds of man-hours it takes to find kills and the dangers of finding and investigating kill sites for compensation (grazing allotment is 137 square miles of mountainous terrain)

Loss of livestock is only part of the problem in dealing with large predators. Weight loss and stress-related illness from continuous harassment are other problems. Too many man-hours spent in livestock management and proper use of natural resources is also a major problem..

A study was implemented on our allotment in 1994. A total of 15 grizzlies, 25 black bears and 2 mountain lions have been trapped and released on our 88,000 acre allotment and I'm under no illusion that all predators have been successfully trapped.

While we have accepted our fate to co-exist with grizzlies, and the fact that 15 different grizzlies have been trapped on our allotment is a testament of our commitment to the recovery of the species, we cannot accept habituated predators on an unconditional basis as they return year after year.

Government regulations have taken away our right to protect our livestock and personal property as well as jeopardizes our future and the future of our children. If problems cannot be solved with the omnivorous bear, what is our future with the carnivorous wolf?

Since most depredations occur at night and considering the huge expanse of terrain and the fact that predators eat their prey, finding and verifying kills for compensation is nex to impossible. Also, considering that livestock have an aversion to being eaten alive by large predators it makes livestock and natural resource management almost non-existent (see attachment #1 video).

My job is to nurture livestock, fix fences, pack salt, shoe horses, and to work with the land and wildlife agencies to ensure habitat protection, riparian improvement and resource management not solely chasing dead livestock.

Wyoming agriculture has had a long standing, co-operative relationship with the land and wildlife agencies to bring about many of Wyoming's wildlife success stories but the balance seems to be lost with the restrictive nature of predator protection. The people who have lived with the land for generations feel that the bureaucrats are now working more for the predator than for the people. We now live in fear; a fear of losing our private property rights, our grazing permits and our right to be able to protect our livestock and personal property, all of which our livelihoods depend on.

The government has spent millions promoting the grizzly and wolf to a revered status. There is little wonder that the small rural population of Wyoming receives little empathy from the larger urban population.

The federal government must educate the urban people of the reality and problems of people living with large predators. This is extremely difficult as we have differing value systems, socially, culturally, economically and religiously. While the ranches and farmers see predators as a threat to their economical survival the urbanites view predators as nothing more than aesthetically appealing.

While saving the grizzly and the wolf seems to be an honorable endeavor, it can't be done at the expense of the hard working American citizens of the State of Wyoming who have lived here for generations and have as much right to life, liberty and the pursuit of happiness as everyone else.

Attachments - All of which will be presented at the hearing April 10, 1996.
#1 Video - Not all inclusive but representative of the problems that exist. 23 minutes
#2 Photographs of predation sites. Again not all inclusive
#3 Correspondence with Wyoming Game & Fish in order to get compensation through appeals and arbitration.

STATEMENT OF PAUL T. WALT
IN SUPPORT OF LIVESTOCK LOSS CLAIM
CAUSED BY GRIZZLY BEAR DEPREDATION

The Walton Ranch Company which has been running cattle on the Black Rock Spread Creek allotment on the Bridger-Teton National Forest in Teton County, Wyoming since 1959, suffered its first serious losses from grizzly bear depredation in the 1993 grazing season.

Because of the verified presence of grizzly bears on the allotment during the 1993 grazing season, and the documented losses of calves from grizzly bear depredation, the Wyoming Game & Fish Department undertook a trapping and radio collar identification study during the 1994 grazing season. The Wyoming Game & Fish Department trapped eight different grizzly bears on the allotment, at which time the Department stopped further trapping activities. Employees of the Walton Ranch Company believe that the actual number of grizzly bears on the allotment was greater than eight and could have been as high as fifteen.

During the 1994 grazing season, livestock losses from grizzly bear depredation began almost as soon as the livestock reached the range at the beginning of the grazing season and continued throughout the grazing season. The actual number of lost animals could not be confirmed until the livestock were removed from the range on October 6th, and thus it must be presumed that losses of some of the unaccounted for animals occurred up to the date of removal of the livestock from the range.

The total number of calves on the range which Walton Ranch Company turned out onto the range was 755. During the 1994 grazing season, 57 calves were lost.

Twenty one calves were lost to natural causes, which 2.8% of the total calf population. This is consistent with the historic average of 2-2.5% annual calf losses from natural causes during the history of the Walton Ranch Company grazing allotment on the Black Rock-Spread Creek allotment on the Bridger-Teton National Forest from 1959 through 1984. Of the remaining 36 calves, 11 were confirmed as killed by grizzly bears by the Wyoming Game & Fish Department. Another 11 probably grizzly bear kills were not confirmed by the Wyoming Game & Fish Department, but their carcasses or remains were located and the circumstances surrounding their loss make the cause of their deaths from grizzly bear depredation highly probable. Fourteen calves were unaccounted for when the cattle were removed from the range in October of 1994. During the 1994 grazing season one cow was killed by grizzly bears and this death was confirmed by Wyoming Game & Fish Department personnel. Wyoming Game & Fish Department personnel approved payment for medical expenses to treat injuries caused by grizzly bears to two animals totaling $97.00 and copies of statements from the Teton Veterinary Clinic regarding the medication for these injured animals are included with the Walton Ranch Company claim.

The Walton Ranch Company claim has included with its claim a total list of calves lost on the Black Rock spread Creek allotment during the 1994 grazing season and has identified the cause of death for all those animals whose carcasses or remains were recovered.

Four different categories of livestock losses were suffered by the Walton Ranch Company on the Black Rock - Spread Creek allotment during the 1994 grazing season.

Natural losses were those caused by infection, poison p ts or highway accidents and none of these are included in this claim. Confirmed kills are those which personnel of the Wyoming Game & Fish Department have already confirmed as being caused by grizzly bears. Unaccounted for animals are those animals which did not return from the grazing allotment at the end of the grazing season whose remains were never discovered. Probable grizzly bear losses are those animals whose remains were discovered, which were not confirmed as positive grizzly bear kills by the Wyoming Game & Fish Department.

The probable category was established because during the 1994 grazing season the animals listed as probable grizzly bear kills included animals which were seen alive and healthy one day, and whose carcasses were discovered mostly devoured the following day. In many of these situations, there were not bite marks on the head or the spine of the calf which could be positively confirmed as grizzly bear bite marks. In some instances there were not sufficient remains left to locate these marks. Consultation by ranch employees with Dr. Steve French, noted grizzly bear researcher, confirmed that it is a common practice of grizzly bears to begin consuming young animals without crushing the skull or the spine, by simply ripping open the stomach cavity. The massive injuries to the young animals put the animals into shock very quickly and death ensues from the other injuries rather than from neck or skull bites. Dr. French noted that he observed this behavior by grizzly bears with young elk calves on numerous occasions and ranch employees believe that the same behavior was involved in the death of those animals listed as probable grizzly bear kills.

The amount of this damage claim is based upon the payment received from the

Saunders Ranch Company for the purchase of the 1994 calf crop and a copy of the sale receipt is included with this claim. A total of 285 calves were sold for $110,200, producing a per calf price of $386.67. This claim is made for 26 calves and one cow as follows:

A. Eleven calves confirmed as grizzly bear kills by the Wyoming Game & Fish Department;

B. Eight of the 10 calves whose remains were found, but whose deaths were not confirmed as caused by grizzly bears (probable);

C. Seven of the 15 calves which were unaccounted for when the animals were counted after they were removed from the allotment;

D. One cow whose death was confirmed by the Wyoming Game & Fish Department as caused by a grizzly bear.

The amount of this claim is $10,550.42. It is comprised of $10,053.42 for 26 calves, $400.00 for one cow and $97.00 for veterinary bills.

STATEMENT FOR THE RECORD

OF

ROBERT WENANDE

RANCHER, CROOK COUNTY, WY

MEMBER OF THE

BEAR LODGE MULTIPLE USE ASSOCIATION/
BLACK HILLS REGIONAL MULTIPLE USE COALITION

BEFORE THE

SUBCOMMITTEE ON FISHERIES, WILDLIFE & OCEANS

COMMITTEE ON AGRICULTURE

OF THE UNITED STATES HOUSE OF REPRESENTATIVES

APRIL 10, 1996

24-721 96 – 4

Testimony Prepared for
Subcommittee on Fisheries, Wildlife and Oceans
April 10, 1996
Gillette, Wyoming
by
Mr. Robert Wenande
3606 D Road
Oshoto, WY

President - Wenande Land and Livestock Inc.
Director - Trail Creek Grazing Assn.
Director - Spring Creek Grazing Assn.
Director - Tri-County Electric Assn.
Member - Crook County Predator Board
Member - Black Hills Regional Multiple Use Coalition

I have been in the ranching business for over fifty years. During that time I have witnessed many declines in wildlife populations due to predators. I have also seen many unfavorable changes in the livestock industry due to the increase in predator populations as a result of the decrease in predator control measures.

During the 1930's and early 1940's there were very few deer and antelope in Crook County basically due to the fact that the coyote population was very high.

As a result of this imbalance, government trappers started using a compound called 1080, a very selective poison to control predator populations. In a matter of a few years the deer and antelope populations flourished, in fact, the Wyoming Game and Fish Commission started issuing multiple licenses to control wildlife numbers.

In the 1950's, 1080 was banned and the coyote population again exploded. As a result of this population explosion the game numbers began to decline. Trappers, aerial hunting and spring denning were used to control predators. These methods were not as efficient as the use of 1080 and game numbers continued to decline.

On our ranch, we allow deer and antelope hunting. We limit the numbers of hunters and the number of animals taken in order to maintain a sustainable population of game animals on the ranch. Despite our efforts, predator numbers continue to increase which then in turn pressure wildlife, causing our deer and antelope numbers on the ranch

to decrease. Each year there are few fawns that make it through the winter from predators.

Predators not only affect deer and antelope, but also bird populations. When I was growing up, there were prairie chickens and sage grouse in unlimited numbers. During the late 1950's, the red fox moved into our country. Red fox are extremely efficient hunters. Prairie chickens and grouse nest on the ground making them very easy prey for predators. Today you hardly ever see a prairie chicken and we have very few grouse.

It is not only the wildlife populations that suffer from coyotes and fox, domestic livestock losses are very significant, especially for the sheep rancher.

On January 1, 1996, there were 790,000 head of sheep in Wyoming totaling a value of $60,040,000. Each year predators continue to erode the value of the sheep industry through substantial lamb and sheep losses. In 1994 and 1995 there was a 15% loss of total sheep due to predators alone. In those same years, approximately 41% of the time a sheep was lost, it was due to a predator and 65% of the time a lamb was lost it was due to predator. The loss in dollars to ranchers and Wyoming's economy due to predators in 1994 was $4,267,500 and $3,500,000 in 1995. Over 32% of all predator losses were caused by coyotes. (Statistics taken from the USDA/NASS Wyoming Agricultural Statistics Service)

We run sheep as well as cattle on our ranch. In a typical year we can expect to lose from 125 to 200 lambs to the predation of coyotes and fox.

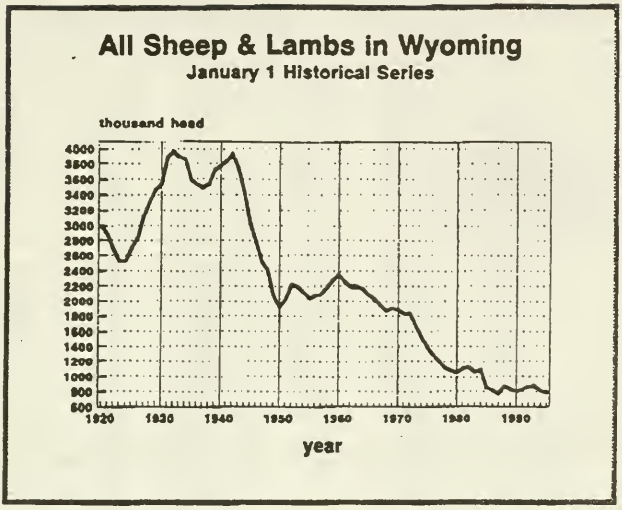
The ranching industry has been experiencing a depression over the past several years for many reasons, predators however, are one of the more significant reasons for loss or gain in the sheep ranching business.

Unfortunately, many people have the impression that livestock ranchers want to completely exterminate coyotes and fox. That is far from the truth. Ranchers are probably one of the strongest advocates for all wildlife species. Our main desire however, is to keep wildlife populations in balance.

There is also the fallacy that ranchers do not do anything to protect themselves from predators. The Predator Control Board in Crook County assesses the statutory monetary limit on livestock to control predators in our county.

In addition, on our ranch, we independently hire a professional trapper every fall for six weeks. In the fall of 1995, the trapper took 153 fox and 47 coyotes from our ranch alone. Guard dogs are also used to protect livestock.

In closing I hope this hearing will shed some light on the impact predators have wild game losses and the ranching industry. I hope this will help to solve the problem with too many predators.



SHEEP AND LAMBS: NUMBER OF FARMS WITH SHEEP 1986-94, AND NUMBER AND VALUE OF SHEEP ON FARMS AND RANCHES, WYOMING, JANUARY 1, 1986-95, U.S., JANUARY 1, 1994-95

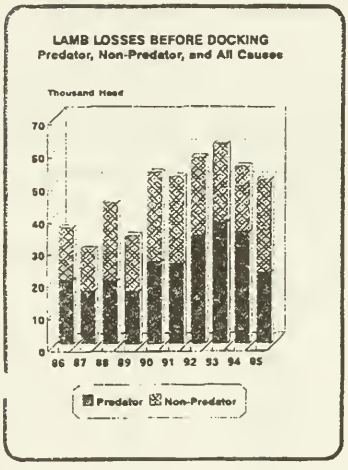
Year	Farms with Sheep 1/	Sheep on Farms January 1				
		All Sheep			Breeding Sheep	Market Sheep
		Number	Value			
			Per Head	Total		
	Number	1,000 Head	Dollars	1,000 Dollars	1,000 Head	
1986	1,400	819	63.00	51,597	720	99
1987	1,500	775	85.00	65,875	690	85
1988	1,500	875	100.00	87,500	760	115
1989	1,500	837	87.00	72,819	720	117
1990	1,500	805	86.00	69,230	705	100
1991	1,500	830	64.00	53,120	720	110
1992	1,500	870	58.00	50,460	720	150
1993	1,500	880	68.00	59,840	690	190
1994	1,300	813*	68.00	55,284	620	190
1995	2/	790*	76.00	60,040	538	252
U.S.						
1994	87,350	9,742.2*	69.90	681,384	7,233.1	1,839.0
1995	2/	8,695.0*	74.70	664,065	6,440.0	2,455.0

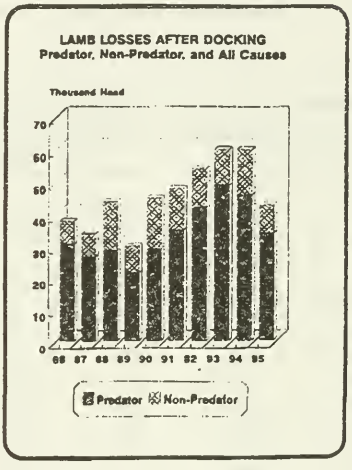
1/Any operation have one or more head on hand at anytime during the year
2/Data not available at time of publication.
*Includes new crop lambs beginning in 1994. New crop lambs not allocated to breeding and market in 1994

Value of Losses of Sheep and Lambs: Wyoming, 1994 and 1995 1/ 2/

Cause of Loss	Sheep		Lambs		Sheep & Lambs	
	1994	1995	1994	1995	1994	1995
			Dollars			
Coyotes	787,800	632,000	2,300,000	1,936,000	3,087,800	2,568,000
Bobcats	13,700	7,900	16,000	9,700	29,700	17,600
Dogs	27,400	39,500	16,000	29,000	43,400	68,500
Bears	68,500	47,400	64,000	43,600	132,500	91,000
Eagles	68,500	31,600	404,000	358,200	472,500	389,800
Fox	6,800	7,900	356,000	266,200	362,800	274,100
Mountain Lions	34,200	23,700	60,000	38,700	94,200	62,400
Other Predators	20,600	—	24,000	29,000	44,600	29,000
Total Predators	1,027,500	790,000	3,240,000	2,710,400	4,267,500	3,500,400
Weather	226,100	142,200	344,000	1,060,000	570,100	1,202,200
Disease	212,400	110,600	520,000	329,100	732,400	439,700
Lambing	150,700	165,900	288,000	232,300	438,700	398,200
Poison	164,400	197,500	112,000	48,400	276,400	245,900
Old Age	287,700	292,300	—	—	287,700	292,300
On Back	68,500	86,900	8,000	4,800	76,500	91,700
Theft	171,300	79,000	20,000	19,400	191,300	98,400
All Other Causes	89,100	110,600	68,000	145,200	157,100	255,800
Total Loss—All	2,397,500	1,975,000	4,600,000	4,549,600	6,997,500	6,524,600

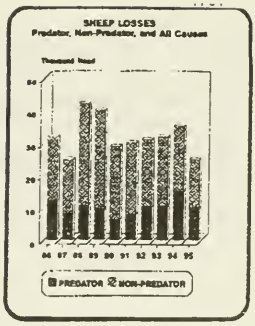
1/Includes all lamb losses both before and after docking.
2/Sheep value is based on a two year average value per head of ewes 1+ years. Sheep value 1994-$68.50, 1995-$79.00. Lamb value per head is based on the annual average price received by farmers and ranchers for a 60 lb. lamb. Lamb value 1994-$40.00, preliminary 1995-$48.40.





Losses of Sheep by Cause: Wyoming, 1994 and 1995

Cause of Loss	1994		1995	
	Head	% of Total	Head	% of Total
Coyotes	11,500	32.9	8,000	32.0
Bobcats	200	.6	100	.4
Dogs	400	1.1	500	2.0
Bears	1,000	2.9	600	2.4
Eagles	1,000	2.9	400	1.6
Fox	100	.3	100	.4
Mountain Lions	500	1.4	300	1.2
Other Predators	300	.9	—	—
Total Predators	15,000	42.9	10,000	40.0
Weather	3,300	9.4	1,800	7.2
Disease	3,100	8.9	1,400	5.6
Lambing	2,200	6.3	2,100	8.4
Poison	2,400	6.9	2,500	10.0
Old Age	4,200	12.0	3,700	14.8
On Back	1,000	2.9	1,100	4.4
Theft	2,500	7.1	1,000	4.0
Other Causes	1,300	3.7	1,400	5.6
Total Non-Predator Causes	20,000	57.1	15,000	60.0
Total Loss All Causes	35,000	100.0	25,000	100.0



Losses of Lambs by Cause: Wyoming, 1994 and 1995

Cause of Loss	1994				1995			
	Before Docking	After Docking	Total Head	% of Total	Before Docking	After Docking	Total Head	% of Total
Coyotes	20,000	37,500	57,500	50.0	13,000	27,000	40,000	42.6
Bobcats	200	200	400	.3	100	100	200	.2
Dogs	200	200	400	.3	200	400	600	.6
Bears	200	1,400	1,600	1.4	100	800	900	1.0
Eagles	7,200	2,900	10,100	8.8	4,400	3,000	7,400	7.9
Fox	6,500	2,400	8,900	7.7	3,600	1,900	5,500	5.9
Mountain Lions	400	1,100	1,500	1.3	100	700	800	.9
Other Predators	300	300	600	.5	500	100	600	.6
Total Predators	35,000	46,000	81,000	70.4	22,000	34,000	56,000	59.6
Weather	7,100	1,500	8,600	7.5	21,000	900	21,900	23.3
Disease	5,000	8,000	13,000	11.3	1,800	5,000	6,800	7.2
Lambing	7,200	—	7,200	6.3	4,800	—	4,800	5.1
Poison	200	2,600	2,800	2.4	400	600	1,000	1.1
On Back	—	200	200	.2	—	100	100	.1
Theft	—	500	500	.4	—	400	400	.4
Other Causes	500	1,200	1,700	1.5	1,000	2,000	3,000	3.2
Total Non-Predator Causes	20,000	14,000	34,000	29.6	29,000	9,000	38,000	40.4
Total Loss	55,000	60,000	115,000	100.0	51,000	43,000	94,000	100.0

Losses of Sheep and Lambs by Cause: Wyoming, 1991-1995 1/

Cause of Loss	1991		1992		1993		1994		1995	
	Total Head	% of Total	Total Head	% of Total	Total Head	% of Total	Total Head	% of Total	Total Head	% of Total
Coyotes	51,300	39.5	67,300	47.1	72,000	46.7	69,000	46.0	48,000	40.3
Bobcats	200	.2	300	.2	700	.4	600	.4	300	.3
Dogs	1,600	1.2	1,000	.7	900	.6	800	.5	1,100	.9
Bears	1,100	.8	800	.6	1,100	.7	2,600	1.7	1,500	1.3
Eagles	4,300	3.3	5,400	3.8	9,500	6.2	11,100	7.4	7,800	6.6
Fox	7,000	5.4	9,200	6.4	11,400	7.4	9,000	6.0	5,600	4.7
Mountain Lions	2,200	1.7	2,000	1.4	1,800	1.2	2,000	1.3	1,100	.9
Other Predators	200	.2	300	.2	100	.1	900	.6	600	.5
Total Predators	67,900	52.2	86,300	60.3	97,500	63.3	96,000	64.0	66,000	55.5
Weather	17,200	13.2	11,600	8.1	17,800	11.5	11,900	7.9	23,700	19.9
Disease	10,600	8.2	12,600	8.8	9,800	6.4	16,100	10.7	8,200	6.9
Lambing	12,300	9.5	13,200	9.2	9,800	6.4	9,400	6.3	6,900	5.8
Poison	6,500	5.0	6,400	4.5	7,500	4.9	5,200	3.5	3,500	2.9
Old Age	5,600	4.3	4,400	3.1	3,800	2.5	4,200	2.8	3,700	3.1
On Back	2,000	1.5	1,800	1.3	1,900	1.2	1,200	.8	1,200	1.0
Theft	4,700	3.6	2,600	1.8	2,700	1.7	3,000	2.0	1,400	1.2
Other Causes	3,200	2.5	4,100	2.9	3,200	2.1	3,000	2.0	4,400	3.7
Total Non-Predator Causes	62,100	47.8	56,700	39.7	56,500	36.7	54,000	36.0	53,000	44.5
Total Loss All Causes	130,000	100.0	143,000	100.0	154,000	100.0	150,000	100.0	119,000	100.0

1/ Includes all lamb losses both before and after docking

TESTIMONY

Presented to U.S. House of Representatives

Committee on Resources

Subcommittee on Fisheries, Wildlife and Oceans

By

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April 10, 1996
Gillette, WY

Coyote predation on domestic livestock, especially sheep, remains a controversial social, political and economic issue. Numerous studies have shown that coyotes are major predators of domestic sheep and lambs throughout the western United States. It is generally assumed that 2.5% of adult sheep and 9.0% of lambs are lost annually to predators, with coyotes as the primary predator accounting for approximately 76% of all losses. USDA reports that in 1994, predators killed 520,600 sheep and lambs with coyotes responsible for 62% of those losses with a value of $17 million. In that same year, Wyoming alone lost 96,000 sheep and lambs to predators (72% to coyotes), valued at $4.27 million. Predation combined with market issues threatens to seriously undermine a major agricultural industry of Wyoming and the west.

Management of predators has been oriented toward the removal of individual animals or of entire populations utilizing a variety of methods. Societal views regarding predator control have changed substantially in recent years. The public has asked for effective, environmentally safe and humane methods to regulate predators and other wildlife populations. Research dealing with the manipulation of reproductive rates in wildlife has progressed greatly in recent years. While there are ethical, economical, social and biological questions surrounding the use of broad-scale reproductive controls of wildlife, it remains a viable alternative to lethal methods.

Research has demonstrated that sheep losses declined by 92% when coyote pups were removed from the adults. It has been theorized that sterilizing or aborting territorial coyotes can be more effective in reducing predation than removing pups or adults from the population, in that non-reproductive coyotes will defend their territory against reproducing coyotes and will not have to provide food for a hungry litter.

Most compounds tested in experiments to control fertility in coyotes have been rejected due to the difficulty of finding an appropriate delivery mechanism or the necessity for multiple treatments. Antiprogestogens, however, are stable compounds that can be administered orally, an important consideration for a field delivery system. One of the earliest antiprogestins, mifepristone, was synthesized by French researchers in 1987. This compound has opened areas of interest and expanded the possibilities for its use in reproductive control. Used as an abortifacient, mifepristone has high levels of success, 80% in some studies, with a single oral dose. When used in conjunction with other compounds, such as prostaglandins, the success rate for complete expulsion of the conceptus approaches 100%. When used in the domestic dog, the results were significant for effective termination of pregnancy without negative side effects. Some antiprogestagens, developed more recently, appear to have an even greater ability to block the effects of progesterone. These compounds appear to be more selective than mifepristone and are effective at lower dosages, possibly acting to block ovulation thereby preventing conception. The study of the effects of antiprogestagens on preventing and/or terminating pregnancy in coyotes has been proposed by researchers at the University of Wyoming. This research will also include an analysis to determine if such compounds can be traced into the environment, development of a field delivery system, and the artificial induction of a fertile state in the coyote.

Many questions remain unanswered regarding the utility, practicality, efficacy and potential consequences of using reproductive controls to mitigate predation. Of greatest concern, at this time, from a research perspective is the availability of antiprogestagens and the high cost of synthesizing the compounds. Societal views regarding abortifacients and lack of federal research support threaten to impede the development of this potentially effective wildlife management technique.

April 10, 1996

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U.S. House Subcommittee on Fisheries, Wildlife, and Oceans
Testimony on the "need" for and approaches to implementing predator control:

1. Need for predator control.

Methods exist for substantially reducing livestock losses without killing predatory wildlife.

Studies in Wyoming show causes other than depredation kill 4 to 5 times more sheep than predators.

The need for predator control has not been verified; reported livestock losses are exaggerated and unreliable.

Conclusion: Congress should rely on statistically valid scientific research which demonstrates that predatory wildlife is only a small part of the problem of livestock losses. There is a lack of justification for continuing the massive federal predator control program at taxpayer expense.

2. Implementation of predator control.

Extensive lethal predator control has not provided a long-term solution to livestock depredation.

Compensatory reproduction follows when coyote populations are subjected to lethal predator control methods resulting in an increase, not a decrease, in depredation.

Experimental drugs such as the "coyote abortion pill" should not be used until we understand more clearly the impacts of these kinds of chemical technologies on native biological diversity and ecosystem functioning.

Conclusion: Lethal predator control is not an effective means of reducing livestock depredation. It would be better to stop killing predators.

3. Acceptable, effective methods of controlling depredation.

An effective program is based on guard animals, shed lambing, improving herd stewardship, and removing/reducing livestock in areas of historically high levels of predation.

Conclusion: Congress should put an end to government subsidies for killing predator wildlife. Emphasis should be on technical support to livestock operators to help them reduce depredation using good husbandry practices.

Written Testimony of
Biodiversity Associates/Friends of the Bow
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prepared by Donald J. Duerr, Leila Stanfield, and Jeff Kessler

Submitted for consideration by the
United States House Subcommittee on Fisheries, Wildlife and Oceans
during deliberations on
The Need For and Approach To Predator Control

Gillette, Wyoming
April 10, 1996

At the outset, we wish to thank the members of the Subcommittee for their interest in this controversial issue and for convening this hearing to examine the need for predator control and to look for socially acceptable methods of reducing livestock depredation.

My name is Leila Stanfield and I will be presenting the testimony for our group, ***Biodiversity Associates,*** based in Laramie, Wyoming. We have been working since 1988 to protect and restore native species, primarily on public lands in the Rocky Mountain region.

The staff in our office have all lived and worked in Wyoming for many years. I personally have lived in Laramie for 27 years. For the past 5 years, we have been researching predator control activities in western states, with a focus on Wyoming and Montana. We have met with federal, state, and county officials who administer predator control. And we have submitted extensive technical comments to these officials on the role of predatory animals in ecosystem functioning, the extent of depredation on livestock, the ineffectiveness of lethal control methods, and the effectiveness of non-lethal methods. We have also monitored "recreational" predator control activities, such as varmint derbies and "bounty" hunts. It is from these experiences that we base the following comments which we submit for the Subcommittee's consideration.

1. The "Need" for Predator Control.

It is true that wild predatory animals sometimes eat domesticated livestock roaming on western rangelands. And depredation can at times have an economic impact on livestock operators, though as discussed below, the significance of these economic losses is often grossly exaggerated by some in the livestock industry.

In those limited cases where livestock losses to predators are truly significant -- in comparison to other sources of loss and to overall herd size -- some method of reducing depredation may be appropriate. It must be understood, however, that reducing livestock losses to predatory animals does not necessarily require killing predators or reducing predator populations.[1] That is, "predator control" and "depredation control" are not the same things. There are ways to

[1] In the remainder of our testimony we will refer to "predator control" as those activities which involve the killing of predatory animals or limiting the populations of predatory animals. This usage of the phrase "predator control" is consistent with the historic practice of predator control in the west and focuses on the activities which are the most controversial. Other activities such as non-lethal control methods and sound livestock stewardship will be referred to as "depredation control" since these methods reduce depredation without killing predators.

substantially reduce livestock losses without killing predators. For instance, lambing in sheds or pens rather than on the open range has been shown to significantly reduce lamb losses to predators, as well as lamb losses to weather and other factors.[2] In fact, as discussed below in section (B), there is evidence that killing predators actually increases depredation, which means lethal control is not an effective means of reducing livestock losses.

Thus, it is *depredation control, not predator control,* that must be the focus of any agricultural support program, assuming, of course, that Congress still believes providing subsidies to private corporations is an appropriate role of the federal government in these times of necessary fiscal restraint.[3]

However, this hearing was convened to address the issue of "predator control." To determine whether there is a justifiable "need" for predator control, it is necessary to determine (A) whether depredation is actually a significant problem when viewed in the context of total expected livestock losses and (B) whether "predator control" has been an effective way of reducing livestock depredation.

(A) Depredation is not a significant source of livestock loss. There is considerable evidence to show that depredation of livestock is not as significant a problem as is reported by livestock operators and state agricultural departments.

First and foremost, where noticeable depredation occurs -- and these areas are limited[4] -- studies have shown that predators kill only a small fraction of all livestock put on the range. For instance, a study entitled "Sheep Losses on Selected Ranches in Southern Wyoming"[5] found that predatory animals killed, on average, only 0.2% of ewes and only about 1.5-3.2% of lambs on five ranches. For cattle, which are better able to defend themselves from attack, losses to predators are typically less than 1 percent, including calves. These levels of loss cannot be considered significant enough to warrant federal intervention and a multi-million dollar "predator control" program.

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[2] See, for example, the Tigner and Larson study cited below at page 252. Of all types of livestock, lambs are the most susceptible to depredation. Ibid.

[3] We also point out that Congress has, of late, been interested in reducing federal government activities that result in a "taking" or reduction of private property values. By providing low-cost grazing permits on federal lands to a small group (i.e., about 20,000) of livestock operators in the west and by providing extensive subsidized predator control support to these same livestock producers, the federal government is effectively keeping the price of livestock products lower than would otherwise occur in a free market. This has the effect of reducing the value of the livestock owned by other livestock producers, thereby causing a "take" of their private property values. If Congress is truly concerned about "takings" issues, it should stop funding programs that reduce private property values.

[4] See, for example, the map provided with the 1994 Statewide Environmental Assessment for Predator Management in Montana which shows widely-scattered and isolated areas of historical depredation loss.

[5] James R. Tigner and Gary E. Larson. 1977. Journal of Range Management, Vol. 30, No. 4. pp. 244-252.

While some people believe eliminating federal predator control activities in the west would cause depredation losses to rise dramatically, there is no evidence to support this belief. In fact, there is evidence to the contrary. For instance, when the U.S. Bureau of Land Management temporarily halted "preventative" lethal predator control activities in 1993, reported livestock losses did not increase, but actually decreased substantially over previous year levels.[6] In section (B) below we present evidence that lethal predator control actually *increases* livestock depredation.

Second, numerous studies have shown that predatory animals are not the most significant source of livestock mortality. Notably, the Southern Wyoming study cited previously found that sheep died as a result of many different problems, not just predation. In fact, of all deaths observed, only 18% of ewe deaths and 24% of lamb deaths were attributable to predatory animals.

This means other causes killed 4-5 times more sheep than predators. The other causes of sheep mortality observed were: disease (up to 31% of ewe deaths), exposure (up to 32% of lamb deaths), starvation (up to 18% of lamb deaths), accidents and non-predatory injuries (up to 10% of ewe deaths), ingestion of poisonous plants (up to 5% of ewe deaths), still-birth (up to 11% of lamb deaths), physical abnormality (roughly 1% of spring lamb deaths), and other non-predatory causes (up to 16% of ewe deaths). Tigner and Larson at 247. Together, these losses far exceed depredation losses.

The Tigner and Larson study also found that the cause of some sheep deaths could not be determined, primarily because the sheep could not be located. The study found, however, that while these losses are "often blamed on predators" they were "mainly due to miscounting and loose management." For instance, on one ranch, the researchers did an aerial survey for missing sheep at the end of the summer grazing season and found 100 live sheep that would have died (e.g., from exposure or starvation) had the researchers not been there. Tigner and Larson, p.250.

Unfortunately, since predators will feed on the carcasses of already dead sheep, and thereby leave signs of depredation, livestock operators often wrongly blame predators for many of these non-predation losses. "Reported" losses circulated by livestock operators and agricultural departments are subjective, are not based on scientifically defensible assessments, are not verified, and are therefore not reliable. Furthermore, there is an incentive for operators to exaggerate losses since without reports of significant loss, there would be no support for predator control programs funded by the federal government. Accordingly, Congress should not rely upon unreliable "reported" losses in determining whether or not there is a justifiable "need" for predator control.

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[6] In 1993, the BLM Worland District conducted only "emergency" control activities, meaning predator control was only authorized in limited circumstances within a 3-mile radius of verified livestock loss and for no more than 5 consecutive days. Livestock losses in the District in 1993 were 278 sheep and 5 cattle. In 1992, however, a full range of lethal control methods were used on the same BLM lands, including "preventative" control whereby predators were killed before livestock were put out on rangelands. Livestock losses reported in the District for 1992 were 719 sheep and 16 cattle. See BLM Environmental Assessment (No. WY-015-EA4-047) for the "Use of Animal Damage Control in the BLM Worland District, January 1994, page 5. Thus, **severely restricting lethal predator control** activities did not result in any increase in livestock depredation, but **actually resulted in a 60-70% decrease in depredation.** Livestock producers reported that predator populations were higher in 1993 than in previous years.

Instead, Congress should rely on scientific research. The Tigner and Larson study of Southern Wyoming sheep ranches was a statistically valid sampling of five ranches over all seasons during a three-year period. It is a far more reliable indicator of actual causes of livestock losses than are livestock operator "reports." Furthermore the Southern Wyoming study results were not noticeably different from the findings reported by other researchers in other parts of the country over the years. Tigner and Larson at 251.

When facts are distinguished from unsupported allegations, it becomes apparent that predators are not a significant cause of livestock mortality by either absolute (i.e., total percent of herd lost to predators) or relative (i.e., percent of all livestock mortality attributable to predators) measures. Rather predators are only a small part of the problem, even if livestock loss can be called a "problem" (rather than merely a cost of doing business on the range). As such, Congress might serve the public better by funding programs to deal with the other causes of livestock mortality. In any case, there is a lack of economic justification for a massive federal predator control program at taxpayer expense.

As a final issue regarding purported reasons for predator control, some people believe that predators should be killed to benefit wildlife. However, this view is naive and fails to recognize that predatory animals are wildlife, and as such they are essential elements of a healthy ecosystem. Moreover, the Wyoming Game and Fish Department[7] has found that "where habitat is unlimited and in good condition, predator control is not needed" because big game populations stay at optimum levels even with predation. Furthermore, the Department found that where high levels of predation are occurring on game populations (including ground nesting birds), there is invariably a "habitat problem" (e.g., overgrazing). The report concludes killing more coyotes "would not decrease fawn mortality, just change the cause of mortality" to accidents, disease, and starvation. Thus, there is no ecological/biological justification for conducting lethal predator control for the benefit of other wildlife.

(B) Lethal predator control is not an effective means of reducing livestock depredation. Beyond the fact that there is a lack of motive for a federal predator control program -- from either an economic or ecologic viewpoint -- the predator control program which has been conducted over the years has been ineffective at reducing livestock depredation. This seems obvious from the fact that lethal predator control has been carried out for over 60 years -- with ever more federal expenditures -- and yet livestock losses have continued. In fact, according to livestock producers, livestock depredation has actually increased over the years.

Some in the livestock business will continue to advocate for even greater killing of predatory animals -- and even greater federal subsidies to pay for the killing -- as the solution to continuing livestock losses. However, this approach will fail for the same reason the current predator control program has failed to reduce livestock depredation.

Most livestock depredation in western states is done by coyotes. See, e.g, Tigner and Larson at 251. A number of studies have shown that when the coyote population is subjected to increased mortality (i.e., from lethal predator control), the animals respond by increasing their rate of reproduction and the sizes of their litters. This effect -- known in scientific circles as "compensatory reproduction" -- results in more young pups that the adult coyotes must feed, a younger-age pack (since there are more young coyotes), and more dispersal of aggressive juveniles (as the new young search for and establish their own territories).

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[7] Thiele, D., Wyoming Game and Fish Department, Division of Biological Services. 1989. "A White Paper on Wildlife Related Predator Control."

Unfortunately, these very same factors cause an increase, not a decrease in depredation. For instance, in another study on coyote depredation on sheep in south-central Wyoming,[8] researchers found that when all adult coyotes and coyote pups were killed in a region,[9] predation on sheep dropped by 98.8%. However, when only the coyote pups were killed, depredation still dropped by 91.6% even though adult coyotes were still active in the area. This shows that the vast majority of predation on sheep (i.e., 9 out of 10 losses) is traceable to adult coyotes trying to feed their young. Thus, since lethal control of coyotes increases coyote litter sizes, more sheep depredation will follow.

A number of researchers have therefore concluded that it would be better to stop killing predators and allow the coyote population to mature; older coyotes have fewer pups and are less aggressive. In any case, extensive lethal predator control has not provided a long-term solution to livestock depredation, and evidence indicates it may actually exacerbate losses.

2. Acceptable Methods of Controlling Depredation.

In light of the lack of justification for a lethal predator control program -- together with the fact that lethal control is proving socially, economically, and biologically unacceptable -- Congress should either suspend federal support for predator control or redirect federal support towards more effective means of controlling depredation that do not involve killing wild animals.

The current emphasis on drugs -- such as the coyote "abortion pill" now being developed by the Wyoming Dept. of Agriculture at the University of Wyoming -- are not the answer either. UW researchers have acknowledged the biggest problems of using bait laced with drugs is ensuring that only the targeted animals feed on the bait. RU-486 is non-specific to coyotes and would affect other species such as badger, domesticated dogs and fox, including the swift fox. In July 1994, the U.S. Fish and Wildlife Service found substantial information exists to support a listing of endangered under the Endangered Species Act. The Service attributed declining populations to "native prairie destruction, *predator and rodent control programs*, trapping, hunting and capture by dogs." Casper Star Tribune, 7/31/94 (emphasis supplied). It is misleading to claim sterilization or abortion drugs such as RU-486 are "non-lethal." The impacts of these kinds of chemicals on native biological diversity and ecosystem functioning are not known.

The abortion pill experiment is pointing up again that there are no easy answers to living in harmony with those aspects of nature over which we have no control and with which we must eventually learn to live in harmony.

We believe the federal government can provide invaluable support and technical advice to livestock operators to help them reduce depredation. An effective depredation control program would offer support for practices such as guard animals, shed lambing, improving herd stewardship, reducing livestock in areas of historically high predation or stocking high-predation areas with cattle instead of sheep.

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[8] Till J. A. and F.F. Knowlton. 1983. Efficacy of Denning in Alleviating Coyote Depredations Upon Domestic Sheep. In: J. Wildl. Manage. 47(4): 1018-1025.

[9] This level of control -- complete coyote eradication -- is economically infeasible on a large scale; it is also biologically and socially unacceptable.

The 1977 Tigner and Larson study reported that lambing sheds would reduce sheep losses from predation and bad weather. Their research also reported that ranches with "poor herders" and "no herders during lambing, showed excessive predator losses." They also observed that "good herders can definitely reduce" predation losses.

Some Wyoming ranchers have started using guard animals -- llamas, donkeys, and dogs -- with great success. One rancher with a historical depredation problem despite lethal control reported having no subsequent depredation losses after putting sheep out with a llama. "County's most famous llama still a good guard." Riverton Ranger, 3/4/94. The Wyoming Agriculture Week Magazine reported producers using llamas "are experiencing a high level of protection from canine predators." 3/19/95. Another Wyoming rancher reported comparable success using a guard donkey. "Jenna, range warrior." Casper Star Tribune, 3/7/94. Ranchers with public land allotments on the Bighorn and Wasatch-Cache National Forests reported no sheep losses using watch dogs. "How Sy keeps the coyotes away." High Country News, 1/28/91. These non-lethal methods have proven 100% effective at controlling depredation where lethal control failed.

In summary, we urge Congress to put an end to government subsidies for killing predator wildlife.

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SCIENCE
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Congress of the United States
House of Representatives
Washington, DC 20515–5001
April 10, 1996

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The Honorable Carol Browner
Administrator
Environmental Protection Agency
401 M Street, S.W.
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Dear Administrator Browner:

I write to call your attention to a severe problem in Campbell County, Wyoming with rabid skunks and ask that you take immediate action to alleviate it.

Several constituents of mine have recently informed me of the large numbers of rabid skunks, most specifically in the Gillette, Wyoming, area and asked that something be done to control this predator. In 1995 alone, 30 people who had contact with either the skunk or other animals feared to be rabid underwent vacinnations ($1,500 per series of shots, the cost of which is not reimbursable through health insurance). In that same year, six horses were put down after being bitten by rabid skunks. This year already, three people have been bitten by the skunks and two horses have been lost.

The problem is that these skunks show up during calving season and when ranchers go out to check their animals (sometimes putting their hands in the mouth of the animal), they may contract rabies because the animal could have been bitten by a skunk without their knowledge. This year's calving season is well underway and I am told that because Wyoming experienced such a mild winter the rabid skunk population may be the highest ever. Yet, according to the Animal Damage Control officials, there are no tools as effective as strychnine to control the rabid skunk. As you know, however, strychnine has been banned by your agency, notwithstanding the fact that there have been no incidental losses of wildlife as a result of its use to eliminate the rabid skunk.

My fear is that unless something is done to lift the restrictions on strychnine use, particularly during calving season, that further losses of life may occur. Can a skunk be so valuable that human lives are lost to protect it? I think not.

PRINTED ON RECYCLED PAPER

I urge you to consider giving Wyoming a special use permit for strychnine during the calving season for the remainder of this year and next in order to bring the rabid skunk population under control. Wyoming should not have to bear the brunt of further economic and livestock losses due to this predator when there are effective tools available to address the problem.

Thank you for your attention to this important matter. I look forward to hearing from you.

Sincerely,

Barbara Cubin

Barbara Cubin
Member of Congress

TO: Jim Saxton Chairman Subcommittee on Fisheries, Wildlife and Oceans

FROM: V.B. Parham, 32 Redpoll Ln. Rt.3, Sheridan WY 82801 307 674-4795

V.B. Parham

I wish to submit the following statement for inclusion in the printed record:

I am the third generation in a livestock (sheep) family. Coyotes, are the native wildlife chosen by the Creator to populate Wyoming along with wolves, antelope, buffalo, bears, etc. Cows and sheep are foreign exotic species ill adapted to our natural ecosystem. Total production of meat is a pathetic fraction of what American prairies produced without the help of man, what with 60 million bison and unnumbered hordes of pronghorn, deer, elk, etc.

The ADC exists as a blatant subsidy to the livestock industry. Taxpayers hould not be expected to provide a zero-risk business environment for anyone. The ADC predator control program is neither cost-effective nor biologically sound. Most of their techniques place threatened and endangered species in jeopardy. Ranchers need to be responsible for protecting their own livestock and doing so with NON-LETHAL techniques. Donkeys, llamas, goats, increasing number of sheep-herders and a few of MANY ways to protect livestock that have proven highly successful. Getting another government hand-out for a poisoning, trapping, snaring, aerial gunning-is not the answer. The public is fed up with the ranchers tax-supported war on wildlife.

This massive welfare system includes over 45 million dollars spent by taxpayers in 1992 to slaughter wildlife. The ADC is a federal agency that kills millions of magnificent predators by poison, torching and gassing babies in dens, neck snares, leg traps and aerial gunning. Your taxes pay for the yearly slaughter of mountain lions, foxes, bobcats, bears, badgers, as well as the thousands of "accidental" non-target animals. The ADC fiasco is only part of the bill we taxpayers shell out to prop up a failing industry that can't make it without highly subsidized grazing fees and wool supports. Taxpayers doled out more than 10.8 million dollars in subsidies to Wyoming wool producers in 1991. This federal giveaway benefited mostly a small elite group. 4% of Wyoming Woolgrowers received more than half of the nearly $11 million; one Johnson county rancher pocketed $223,376. I have a profound respect for the small ranchers out there working day and night to eke out a living. Unfortunately it's the big multi-millionare ranchers in it for the tax breaks that are destroying our country. We cannot continue this war on wildlife and destruction of native eco-systems that are turning our wildlands into livestock ghettos. It is not profitable to the honest hard-working small ranchers and it is turning more and more citizens against livestock grazing on public lands. We need to return to native species like buffalo, implement suatainable agriculture, and create vast NATIVE wildlife sanctuaries in celebration of the rich prairie production possible when we return to a proper balance of predator and prey species as the Creator originally installed here. You cannot improve on the Master Plan and the sooner we get back to a reverence for all life, including the foxes, coyotes, badgers, etc. the sooner we will enjoy a productive and diverse economic system.

Please take those sheep loss figures with a grain of salt. I know how it works. Sheep are not the brightest or hardiest of critters and when they die of disease, injury, pervasive digestive disorders, there is strong financial incentive to call it "coyote predation". A U.S. Fish and Wildlife study called Wyomings predator losses "grossly overestimated".

Our family once raised an orphaned fox cub who was a very loving and gentle companion, extremely intellegent and sensitive. I've also been blessed with a life experience with wolves and found love and affection are far more intense with wolves than any other animal, two-legged or four. It breaks my heart that their little cousins are being indiscriminately shot, poisoned and tortured to death for no other reason than living their lives as God intended, being predators in their native homeland and trying to provide food for their children.

page 2
Victoria Parham
307 674-4795

Red-meat producers persuade us that grazing is "good for the land" just like the tobacco industry says cigarettes are fine for the body.

I'm the 3rd generation of a livestock family and I'll tell you what I think. Falsified ad campaigns by ag interests are not going to cut it with the public anymore.

The recent Bureau of Land Msnagement report aptly described the concerted efforts by the livestock industry and wealthy western congressmen to deceive the public through "campaigns of misinformation" which conceal the fact that rangelands are "almost invariably" in poor condition to the great detriment of native wildlife.

"Elk and deer dying in winter is yet another symptom that can be blamed on weather, when in reality many die from livestock overgrazing." Eighty-five percent of all U.S. topsoil loss is associated with livestock grazing, and a 1990 Environmental Protection Agency report says riparian areas throughout the West are in "their worst condition in history."

The cow is an alien, exotic species ill-adapted to arid Western ecosystems. Unlike native buffalo, the cow (which evolved in humid Europe) tends to congregate and stay on the most fragile areas near ponds and streams.

Native birds and plants are pushed out when the soil is compacted and streams choked. Thousands of streams are reduced to a mere trickle. Others are too shallow, filled with sediments, devoid of riparian cover, and laden with excrement.

A report from the United Nations says, "Overgrazing is changing 85 percent of the West into a desert of scrub and creosote bush," threatening an environmental disaster that could affect everything from food production to scarce water and wildlife.

The U.N. report warns that damage to semiarid lands, due mostly to overgrazing by cattle, already costs nations around the world $42.3 billion per year in lost crops.

Even if one could deny all the documentation from growing numbers of scientists, those who live here have undeniable evidence from our own eyes and noses. We dare not put a sleeping bag down in the dark, our public wildlands swarm with flies, riparian areas are trashed, and the stench of cows is overwhelming even in the most remote places.

Even though federal laws require that public lands be managed for multiple use, our "public lands" are being managed for the benefit of the Ag industry, 7 percent of the population. The remaining 93 percent have watched the land we love turn into a gigantic cow ghetto.

Cows, unlike native buffalo, cannot survive a natural ecosystem with predators, so taxpayers in 1992 spent over $45 million to slaughter wildlife on public lands and provide a low-risk business environment for Ag interests.

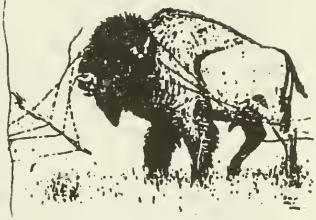
The Animal Damage Control (ADC) exterminates millions of magnificent predators every year in order to turn our wildlands into big open-air stockyards. Our governor puts agribarons on the Game and Fish Commission and shamelessly begs the feds for $250,000 extra to poison native wildlife this year.

Federal agents raided Wyoming's Agriculture Department and uncovered evidence of an illegal trade in deadly poisons stretching from Texas to Wyoming. The director of the U.S. Fish and Wildlife Service said the agents seized enough poisons "to probably kill every man, woman, child, and predatory mammal in the western United States."

This tax-supported war on wildlife must end. Our millionaire politicians must be held accountable to the public's demand for protection of our natural heritage.

Public lands do belong to the public and the public won't tolerate the expense and the degradation much longer. We've watched the destruction of millions of acres of grasslands and the invasion of alien plants such as cheatgrass, which is 500 times more flammable than native grasses, as well as the seeding to monocultures of introduced grasses such as crested wheatgrass, an import from Turkestan shunned by everything except cows.

In order to grow cows in a place where they do not belong we've had to ravage the natural environment. I think it's time we livestock people admit a mistake and eliminate grazing on public lands. Only 2 percent of the nation's beef is produced on public lands anyway. There are plenty of private lands. It's time to move meat production to more appropriate terrain.



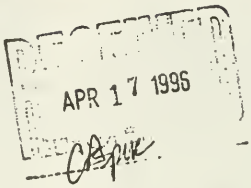
* Personal experience: "Predator-control emergency" is a fabrication designed to get more federal handouts.

Victoria Parham

TESTIMONY FOR SUBCOMMITTEE ON FISHERIES, WILDLIFE AND OCEANS TO ADDRESS THE ISSUE OF PREDATOR CONTROL

April 15, 1996

The Honorable Barbara Cubin
100 East B St., Suite 4003
Casper, WY 82601



Ken Harriet
P.O. Box 435
Buffalo, WY 82834

Dear Representative Cubin;

Having attended the recent F.W.& O. Subcommittee field hearing in Gillette, I would like to thank you for your concern over the very real predator problem we face here in Wyoming and the rest of the west. I thought it was a well prepared and informative discussion and that a lot of opinions that needed to be heard will be taken back to Washington, D.C. to help educate the people that vote on the laws that effect us here in Wyoming.

Before I go on, I'd like to briefly tell you about my experience with predators and predator control. I first purchased sheep in 1971 and shortly thereafter, in 1972, the federal government banned the use of compound 1080. It took approximately four years before we saw any significant loss to coyotes. In the following three years, our losses increased to 20% of our lambs in certain instances. In that time, I incurred losses due to predators (eagles, fox, coyotes) anywhere from 6% of lambs born to up to 66% of all lambs docked (in 1992 when I sold my sheep and replaced them with cows). Having seen many years when predator losses turned profits into losses in my sheep operation, I became involved by serving on our county and state woolgrowers' predator boards. Although I no longer own sheep, I still lose calves to coyotes and eagles. If we could get some real means to control predators, I would like someday to be able to have sheep in my operation again. Since turning to cows my financial losses due to predation has decreased, but I have also seen a reduction in my ability to utilize my range as efficiently as before and a reduction in my cash flow due to leaving only one crop for me to sell, instead of three as I had with sheep.

I would now like to go over a few points addressed at the Gillette meeting and give more insight into the problems we've faced with predators. First of all, the question arose as to who should be responsible for the funding of predator control and who should carry it out. My opinion is that the Federal Government outlawed our most efficient and cost - effective means of predator control when they stopped the use of toxicants. As was stated at the Oversight Hearing, when toxicants were outlawed we were promised a study to find means of control that were as effective. Instead, the Federal Government has passed laws to the contrary.

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To clarify this, I point to the removal of the ADC from Interior to the Department of Agriculture. This shifted funding from predator control primarily in the West, to include controlling rats in New York City from the same money. The State Of Wyoming now received less money and that is not what was promised. The latest instance was the order to stop the use of M-44 guns and limit aerial gunning on federal lands in a directive sent out by the Department of Interior. This stems from threats of litigation by the environmental community, for failure to uphold the ESA and NEPA. With half of Wyoming owned by the federal government this further ties our hands in our fight to combat a very real problem.

The Woolgrowers Association filed suit to overturn this decision, but the presiding Federal Judge refuses to hear the case or make a ruling on it. Not at all the help that was promised. If we are to continue to have a viable sheep industry in Wyoming we need to be able to use all the means available on federal as well as private lands, and that help includes M-44's, 1080 collars, and unrestricted aerial hunting. Our ranching operation contains a block of BLM land approximately five miles wide, surrounded by private land. Legally, we can not aerial hunt predators in the middle of our ranch. My opinion is that the Federal Government should be responsible for their share of funding but I would like to see less stringent means of control placed in the hands of the local predator boards.

The Oversight Hearing generated a lot of discussion on the effectiveness of predator control and the taking of problem coyotes. Here in Johnson County, we, the stockgrowers, tax ourselves, hire our own two county trappers and are independent of the federal ADC. In spite of these measures, we're still losing producers. The elimination of the wool incentive program was a loss of income for sheep producers, and if you tack on a 20 to 30% loss of lambs, a lot of profits turn into losses. When I started in the sheep business in 1971, average annual death loss to natural causes was from 2 to 5%. These substantial increases in losses have lead several ranchers in our county to pool their resources and hire private trappers to help patrol their ranches along with the county trappers. Loss of sheep producers in our county has greatly reduced the amount of money our local predator board has to combat the problems.

In 1995, between 800 and 900 coyotes were taken in Johnson County. The Wyoming Game and Fish Commission hedges on whether predator control helps wildlife populations. I have personally watched healthy crops of fawn deer and antelope disappear over the winter until there are hardly any left by spring. I've also watched coyotes and golden eagles gather on an antelope herd and spend the entire winter living off of them, feeding mostly on the fawn population. When the Wyo. Game & Fish states that predators don't affect game populations, I find myself asking how many fawns would survive the winter with an additional 800 to 900 coyotes feeding on them.

Sixty to eighty thousand golden eagles are now estimated in the lower 48 states. These birds are still on the protected species list. I have personally watched these birds kill full-grown antelope and carry newborn lambs back to their nests. Our ranch used to have hundreds of sage grouse and over a hundred wild turkeys. I've seen only two turkeys in the last three years, and no sage grouse in the last two years. All these numbers correlate with our selling of our sheep. Without the sheep to feed on, game animals and birds become the coyote's number one food source.

Coyotes will also move in great numbers to where the sheep are. I point to several neighboring ranches who pooled resources and hired their own trapper. This man killed 136 coyotes and numerous foxes in 1995 on these four ranches. This does not count what the county trappers killed on them. These four ranches run about 11,000 sheep between them, and when it is said that predator control is not an effective means of reducing livestock depredation, I must ask why so many coyotes live in the middle of the sheep. It has also been said that when you kill coyotes in an area, more coyotes move in and produce larger litters due to larger populations of prey. I ask, how many coyotes will 11,000 sheep support, and isn't 11,000 sheep a large enough prey base to generate large litters each and every year?

The Wyo. Game & Fish Dept. always hedges on this train of thoughtand proclaims how they give money for predator control. The fact is, that for a period of three years, due to public outcry against predator control, the Wyo. Game & Fish withheld all $100,000 of their predator funds and used this money to study ways of counting coyotes. Two years ago, due to pressure from their local Game Wardens, the Wyo. Game & Fish reinstated their fight against predators. Now, they again give $50,000 to local predator boards to be used in areas where local Game Wardens feel coyotes are hurting game populations. The other $50,000 is still being used to find ways of counting coyotes and new ways of controlling coyote populations, i.e.birth control. Only $50,000 is spent on actual control. Wyoming is big and $50,000 doesn't go very far when divided between 23 counties.

Wyoming livestock producers are trying to get state legislation passed that would allow individual ranchers to donate revenue from land owner coupons toward predator control. Lacking federal funding, they are taking it upon themselves to find other ways of financing predator control out of their own pockets.

Dan Chu of the Wyoming Wildlife Federation states in his testimony before the Oversight Hearing that "Predation is essential to the natural balance healthy ecosystems need to sustain viable wildlife populations." This is a fallacy - disease and weather control both predator and prey populations. Blue tongue at times wipes out large numbers of deer and antelope, just as bubonic plague wipes out large towns of prairie dogs, rabies kills off lots of skunks, and cold, harsh winters will often get rid of large populations of rabbits. Never are predator/prey numbers perfectly balanced, one is always ahead of or behind the other.

In Summary, I believe we have a very real predator problem, not only to livestock but also to game animals. Each party should be responsible for their fair share of the funding required to fight the problem. I very much agreed with the testimony of Ron Micheli, Director, Wyoming Department of Agriculture, that the State of Wyoming would be a more efficient administrator of the control program. Of the $900,000 a year the federal government spends on predator control, roughly one half is spent on administration. I firmly support a block grant to the State, with local predator boards allowed to determine how best to use this funding.

Thank you for your concern. The Subcommittee Oversight Hearing was very informative and very well run.

Sincerely,

Ken Harriet

Ken Harriet

ATTN: Carrie Moore
RE: Public Comment on Predator Control, Congressional Hearing 4/10/96 in Gillette, Wyoming.

Honorable Subcommittee:

Thank you for the opportunity to offer public comment on the subject of predator control. I have been a student of the economics and effectiveness of predator control in the west since the early 70's and I have reached the conclusion that the way it is conducted currently is neither economic or effective. Please allow me to be more specific.

First of all, the goal of predator control should be correctly stated as a program to help agriculture continue as a viable industry not "to control predators or losses". The latter is probably impossible, largely immeasurable and will be ineffective regardless of our efforts. Predator control could possibly be an objective is specific sites, but it shouldn't be the goal.

Given that keeping the livestock industry healthy is the goal it is evident that predator control has failed over say the last 20 years. The factual evidence for this conclusion can be found in the Wyoming Crop and Livestock Reports from 1968 to 1991, and fiscal information from ADC, the Wyoming Agricultural Department and Wyoming county Predator Control Boards. Information from scientific literature on the dynamics of predator populations and predation may give us some of the reasons why our actions have been ineffective but that is another subject.

The facts show that millions of dollars have been spent in Wyoming alone (Figure 1) and the figures may approach the total value of the sheep lost in a given year to coyotes. In spite of this money spent, the number of sheep on the range continually has declined and sheep ranchers have stopped producing sheep (Figure 2). In spite of the removal of thousands of coyotes under every conceivable regime sheep losses have remain relatively constant for twenty years (Figure 2). Lethal control methods changed dramatically (i.e in 1972 1080 was banned) but coyote losses have not changed significantly although they have decreased somewhat (Figure 3). All of this money and effort that has been put out in the past has not kept sheep ranchers in business. It is interesting to note that if we put 1000 sheep on the range the coytoes will eat thirty and if we put 100 sheep out they still appear to eat thirty, but that is the other subject mentioned above.

In fact, the only measurable results of predator control in Wyoming are that we have created jobs for administrators, pilots, biologists, hunters and secretaries. Count them. Check out the pay scales and benefits compared to ranchers and professional herdsmen. In short, we created an ineffective bureaucracy that employs everyone except ranch families. If you ask a rancher if he wants to be taxed so that biologists can write EIS's, meet with other bureaucrats, write more reports and provide lucrative contracts to small aviation firms and hunters, they would say absolutely not and so do I.

It is evident that Wyoming state and county programs have not kept ranchers in business either. The rancher's tax dollars have not even been well accounted for. I challenge you to audit the Wyoming county predator control boards and you'll see what I mean. Ranchers often operate on a very low profit margin. It is foolish to tax the sale of their stock and only to have the majority of them never receive a single benefit and go out of business. The fact that even those that do get some predator control effort, have continued to go out of the sheep business is more evidence of the folly. In Teton County close to $50,000 of the rancher's money amassed in a predator control account that no one could access for years because there was no predator control board. In other words, their was no demand for organized

So, what should we do? On the federal level the actions of ADC should simply provide the money to ranchers that want to hire ranch hands and herders or pioneer better predation "prevention" methods. This should probably be directed to the ranchers with the heaviest predation losses. No biologists, pilots, secretaries or gunners. Just more stockmen who are better prepared, staffed and economically viable. There isn't a ranch hand in Wyoming that wouldn't work hard for the salary and benefit packages of one ADC bureaucrat. And while these ranch employees worked, they would probably shoot, trap and poison every coyote they could with the same results ADC achieves now.

On the State level, let the rancher keep his tax dollars. It's popularity is exacerbated by the attempt to get matching ADC funds in the first place! Don't force the creation of ineffective bureaucracies that don't produce the desired results. Match the ADC funds to programs that help ranchers hire good help, employ their families, build better lambing sheds, what ever they can think of to help their ranch and their communities be self sustaining.

Please keep agriculture viable and do not waste any more of our taxes on these "predator control" efforts that have failed so misserably for the last thirty years.

Respectfully Yours,

Tom Segerstrom

Tom Segerstrom,
Jackson, Wyoming

FIGURE 1

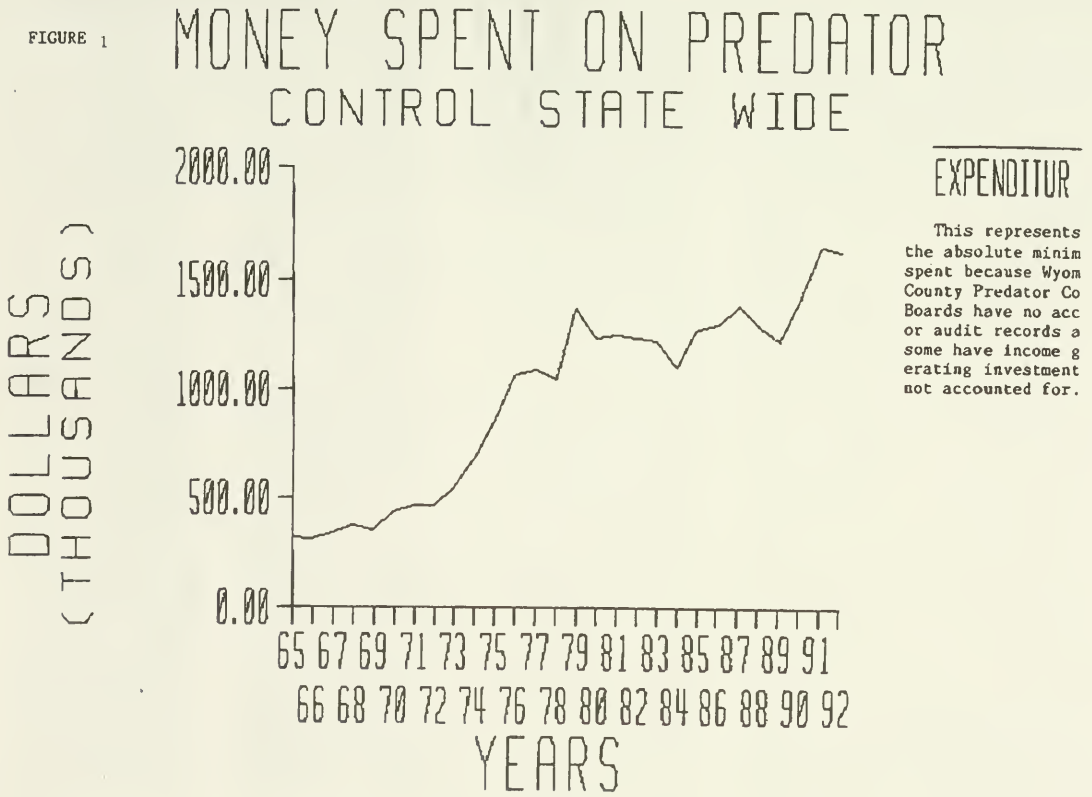

MONEY SPENT ON PREDATOR
CONTROL STATE WIDE
DOLLARS
(THOUSANDS)
2000.00
1500.00
1000.00
500.00
0.00
65 67 69 71 73 75 77 79 81 83 85 87 89 91
66 68 70 72 74 76 78 80 82 84 86 88 90 92
YEARS
EXPENDITUR
This represents the absolute minim spent because Wyom County Predator Co Boards have no acc or audit records a some have income g erating investment not accounted for.

FIGURE 2.

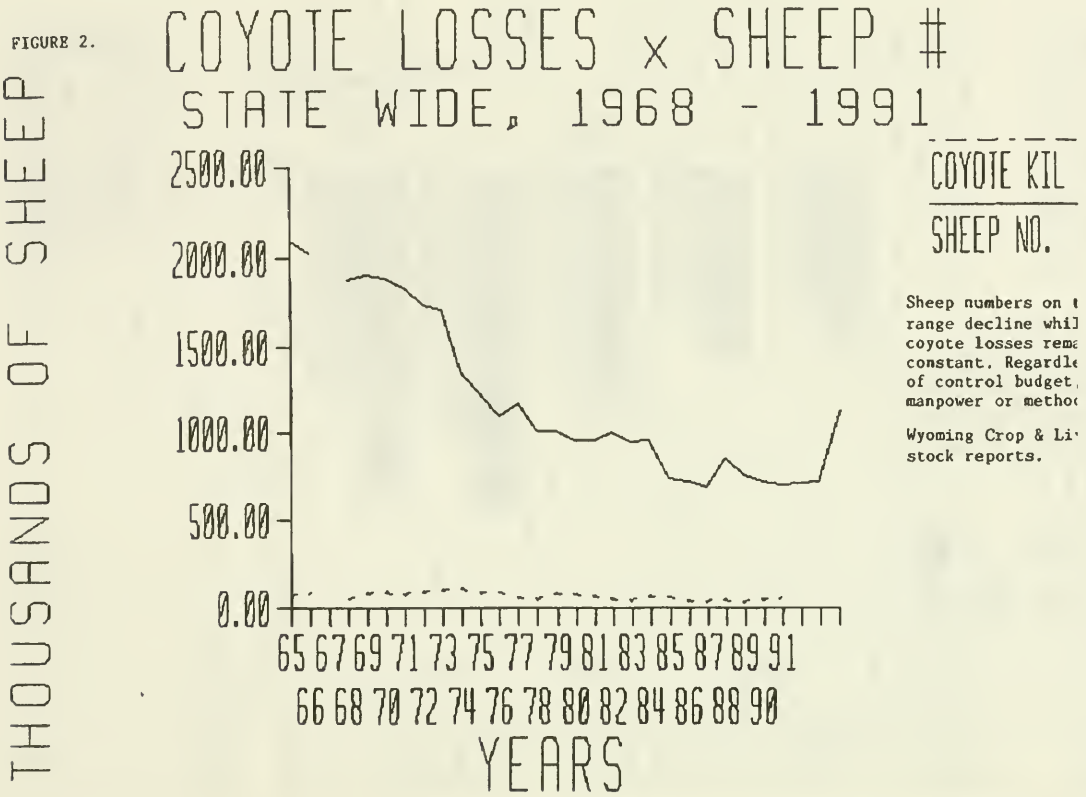
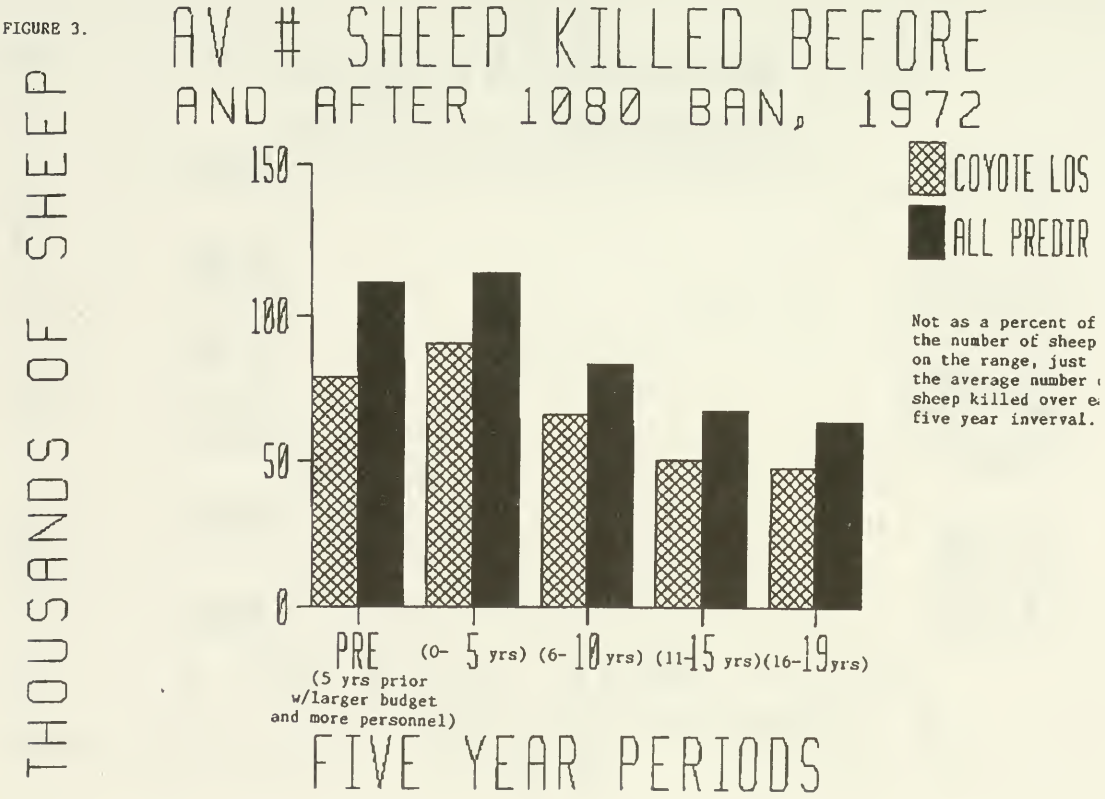
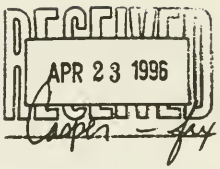

COYOTE LOSSES x SHEEP #
STATE WIDE, 1968 - 1991
THOUSANDS OF SHEEP
2500.00
2000.00
1500.00
1000.00
500.00
0.00
65 67 69 71 73 75 77 79 81 83 85 87 89 91
66 68 70 72 74 76 78 80 82 84 86 88 90
YEARS
COYOTE KIL
SHEEP NO.
Sheep numbers on t
range decline whil
coyote losses rema
constant. Regardle
of control budget,
manpower or metho
Wyoming Crop & Li
stock reports.

FIGURE 3.


AV # SHEEP KILLED BEFORE
AND AFTER 1080 BAN, 1972
THOUSANDS OF SHEEP
150
100
50
0
COYOTE LOS
ALL PREDIR
Not as a percent of the number of sheep on the range, just the average number sheep killed over e five year inverval.
PRE
(5 yrs prior w/larger budget and more personnel)
(0- 5 yrs)
(6- 10 yrs)
(11-15 yrs)
(16-19 yrs)
FIVE YEAR PERIODS



April 23, 1996

This is to be submitted as testimony for the Predatory Board Control Meeting in Gillette, WY, on April 10, 1996.

I am Robert F. Christensen, age 42, lifelong rancher. I live forty miles south-southwest of Gillette, WY, off the north end of the Pumpkin Buttes and on the east edge of the Powder River Breaks (both prime coyote refuge areas).

We reside and are trying to ranch in the middle of the Powder River Basin. This is a large area, which at one time--20 years ago, had a large number of sheep in it. In the last years, the sheep numbers have been declining at an alarming rate all over America, but especially in the areas where there are larger herds and larger ranches. Farm flocks can still be somewhat protected from the murderous criminals that roam freely, and are now even somewhat protected, amongst us. Anyone who lives in a rural area and has livestock knows that I am talking about predator problems. For me, my wife, and family of five children, which we are trying to raise and give morals and ethics to, the primary murderous criminals are coyotes and secondary is the revered "Golden Eagle". However, there are people in Wyoming in other areas that have a great deal of trouble with mountain lion, grizzly bears, and some day coming again in the future, will be the wolf. I fail to see what is so neat, appealing, alluring, or whatever it is that people see in the wolf. All he is is a smart, calculating, flesh-eating, hungry animal that will do anything he has to to eat and survive. The coyote is just a little smaller version of the same murderous thief. Animal behavior is and always has been, the same through time. Don't forget humans are also animal species and when hungry, have demonstrated pretty drastic measures too. Our forefathers weren't as stupid as we now try to make them out to have been. It's always said that the wolf was and is misunderstood. Thats B.S., if I can be so blunt! The people who settled this country soon realized what they were up against with an adversary like the wolf. That's why there were so many programs such as the county and state bounties set up and values placed on the wolf so they could rid this some time to be "great country" of such a virus for the benefit of prosperity, safe living, and a more relaxed way of life for our kids and grandkids and all future generations.

The people today that have been so easily swayed into believing the wolf and coyote are good animals and necessary for the balance of nature, are not stupid people. I would never try to say that they are. They have been fed all this propaganda and made to believe you can have harmony in the

wild--a utopia. However, any high school kid learning basic ideas knows that such a harmony is not possible in the real world. These people are speculating and forming opinions without the "hands-on" knowledge and experience to make such accusations. Therefore, I would say they are "ignorant" to the facts, not stupid. They are too many generations removed from the actual events and life of the time. All you have to do is talk to some of the "old timers", and they will give you an earful real quick about predators.

With our forefathers' astute observations and intelligence, and a good work ethic directed toward personal rewards, instead of a bureaucracy of laws and policies that strangle and form stumbling blocks and a large taxation base to try to feed also, they built the best republic in the history of the world which is looked up to by almost every person in the rest of the world today. After they pretty much took care of the wolf, they then went on to the coyote and other predators that caused numerous pains and losses to everyone in this country. Not only do the predators hurt the ranchers, but the losses trickle all the way through the economy and society. If there were more lambs and calves produced each year, there would be more work for feeders, livestock meat processing plants, wholesale meat suppliers, distribution centers (grocery stores, restaurants, etc.), the trucking and transportation industries between each and every level. Of course, another benefit to the consumer--the old law of supply and demand. For the higher the supply, the lower the price will be.

The agriculture community has notoriously always been a reasonably strong and silent type of people taught to be self-sufficient and to figure out and take care of their own problems. They don't try to tell everyone else how to live their lives, and please everyone else, don't try to tell us how to live ours either.

The American agricultural community feeds a lot of the world. It has been the only thing in our GNP forever, that has compensated for our imbalance of trade deficits. Then you treat us this way be strangling the abilities to continue doing an efficient and good job. Through today's big government and government's meddling and strangling the abilities of its people to operate efficiently and effectively through lots of policies and laws that have been enacted, agriculture and its profits have dwindled steadily. Anyone who doesn't believe this and thinks ranchers and farmers are still so filthy rich, can ask any accountant or banker in these communities, and they

can tell them really fast how agriculture compares today to other businesses. The only reason some agriculture makes a little money is because of size and volume, it isn't because of margin. A few years ago, the average age of people in agriculture was almost sixty. That's pretty alarming!! If it is so good, how come very few young people are getting into agriculture. Government had better wake up and see real quick what is happening to ag and the potential disaster on the horizon for the vehicle that has been feeding a lot of the world. If you don't believe how fragile the ag ecosystem is, just look at what the poor corn crop for just one year has done to the system and prices on both sides of the aisles--the ag people and the consumers.

It's not only agriculture but the G.P.I. of all the USA people that has been on an almost simultaneous decline as the size of government has increased. I guess this could be another issue all to itself, though. Let us not forget, and for anyone who has, just go back and study your fifth grade history of why and how this Great Country came to be. It was through a revolutionary war to claim independence from a government that oppressed the people with all its bogus laws and the outlandish taxation imposed on the productive side of the society. Does this sound just a little too familiar? Our forefathers debated and discussed for years to develop a system of government where this could not happen again to their future generations. They developed a Constitution and such things as "Bill of Rights", to give "the people" freedom and choice and the chance to own and protect anything that they could work hard for and achieve. It was a good incentive plan which hurled the nation into a massive giant in no time. Today, it's getting pretty hard to see what incentive there is. With all the laws, policies, and taxation on anyone in society who is trying to be productive and on the other side of the program we essentialy reward non-production with our welfare system and no limitations on how many kids they have or with how many deadbeat men that never look back or anything. Don't forget "private enterprise" and the working individual are the steady horses pulling the wagon. Also, through programs such as the "Wetland Issues", we have taken away private ownership and the ability to own and protect things we have worked hard for, and paid taxes on and helped this nation become what it is. In order for us to do what was supposed to be guaranteed "the people's rights" in our original charters, it has made us choose between rolling over and giving up and taking the losses which no one can absorb very long, or becoming criminals in some way to protect what is ours, or whatever else we can do, and going against the very core and fiber of what our nation and society was set up to achieve which the rest of the whole world look up to.

Every since this nation supposedly became "civilized", and the lawyers and psychiatrists tried to defend and save everyone, the quality of life and safety of our families has steadily eroded to an alarming rate now. Every animal species on the face of the earth, has and always will have, a few bad seeds which in cases of dogs, cattle, lions, bears, and every other species that exist, we try to eliminate the problem ones from society. Predators are the same kind of murderous thief in the rancher's society of the domestic animals, which feed this nation and some of the world. Domestic animals are reasonably gentle and are almost like pets, "part of the family". It is awfully disheartening to go out and see them every day with their throats ripped out and pieces and parts of them eaten away, and some times when they were or are still alive. What an awful way to go or thing to endure! It's almost like they look at us and say, "What are you doing to us?" And, no one in agriculture can give them a good answer. We used to have a good control on predators until government stepped in. Until all of the misinformed environmentalists stepped in to save the world and create this nice utopia which can only exist as an idea on paper or in theory, the people and even government realized the severe problem that predators were. That's why the research center in Denver was created and funded. Over the years, they were asked to develop new and effective ways to hand the problems. The most effective and efficient way ever developed was the substance "1080". It was very selective to the stomachs of canines and other single-stomach animals. It also, if used correctly, did not affect any fowl such as eagles, hawks, etc.

After listening to the speakers on the boards that day of the hearing, I even more than before realized the mistake and subsequent atrocities that have risen from the misinformation and undue hastiness of the Nixon administration in the executive order signed banning the use of 1080. The EPA made it "official" to not use the 1080 substance a month later, also in a hasty, fact-unfounded move. After they had time to study it and get away from the emotional "Bulldozer Effect" a few months later. the EPA came back and said: "I think we made a mistake; we need to reinstate the use of 1080." However, as has always been and still remains to be evident in human nature and especially Congress and administrations, no one likes to step up and say, "I'm sorry, it looks like I made a mistake and made a hasty unfounded decision that in time is going to cost way more bad problems than it is going to save good things. We have an ego to uphold and too many people are watching. I can't loose credability in the position I am in!" You know, I was taught it was divine to admit a mistake, and that two wrongs don't make a right.

I don't think anyone in the world, even we nasty, unfeeling ranchers, want to see any species eradicated from the face of the earth. Not even the predators like the coyote, but especially not the species like sheep, either. The sheep with its ability to provide wool for warm clothing and meat for food, played a major role in the settling of this great frontier we now call the United States of America. I would like to see this continue in the future, if possible. At the rate of predator problems I personally have now, the sheep and even somewhat the cattle, will become a thing of the past. I have records for 30-40 years and can show anyone what the normal years (and there were many) were like before the coyote came back so big again now after the 1080 ban.

1080 was efficient and effective in numerous ways. Not only to the rancher, but to the government also which, if we don't forget, is "the people"--everyone else in this nation. It was the most effective way of controlling (not eradicating) predators which also included rabid skunks and things like this which are now on the rise again. It was the most efficient in the fact that it got most of the coyotes in the areas of sheep production, where it was used and control was needed. It was also the most efficient in the fact that the cost to government was a small percentage of what is now being spent with not nearly as effective a job being done. I don't see why in certain areas that 1080 can't be used again. I thought that our zoos and especially our parks systems were for creating natural ecosystems where all wild animals could live and a place where all the animals and their existence could be protected. Maybe I am wrong, but I don't think so. I, nor anyone I know, has ever been called up or visited by any tourists or anyone from the city that came and wanted to see the cute little coyotes which are ripping the flesh out of what I think are the cute little lambs and calves. I fail to see why I have to support all these animals in my area because of a ban on 1080 (the only effective and efficient means to date of control to predators) and feed the predators to live off of me so the city folk and environmentalists can have them around.

During the meeting in Gillette on April 10, the speaker from the National Cattlemen's Assn. talked about Wyoming and tourism and what a pretty place it is. I'm partial, too. I've lived here all my life and think it has a certain beauty also. Lately though, that beauty has been going away on our ranch. We very seldom see the sage chickens like we did in the late 1960's, through the '70's, and some early '80's. (Keep in mind this was the time period when 1080 was used and the effects for years after, until the coyotes and predators have build their numbers up to such high proportions now). I can't

remember the last time I saw a grouse. Even the rabbits that used to cycle with their diseases are now just in a permanent down cycle on numbers. Also, the prairie and ranges are becoming cluttered with old carcasses and bones creating an eye sore in my own eyes. During this time I don't remember the rodents and such that the environmentalists talked about that day that we needed the coyotes and other predatory animals around for control of, to be a bit bad or even worse than they are now.

To quote our President Bill Clinton, on his speech given on April 22 in the Grand Canyon when he was talking about expanding our parks and protecting the environment. He said, "Let's work together to make sure our land is not stripped of its natural beauty while enhancing the prosperity of our people. AMEN!! I couldn't agree more. Let's see if we can't do that very thing!

All day long at the hearing in Gillette, every panel member was asked to show or come up with stats to back up their claims. There are many reports out there on the number of kills by predators and the losses over the years. I never heard the last two speakers, "the Environmentalists", friends of wildlife as they make themselves out to be, give many stats, though. It just gripes me to the soul of my constitution when these people call themselves "Environmentalists", They have no more idea of the true environment out here than the man on the moon. Take someone who has lived and worked their entire life right in and amongst the environment day after day, and they can tell you what is actually happening out there. It's no different than every arm-chair congressman who picks up a few small bits and pieces of certain bills and proposals and instantly knows "everything about nothing", but wants to tell you people in and around it every day which have studied it thoroughly with staff members, etc., how wrong your decisions are. Everything I heard from those two that day was, "I believe . .", except for the 1977 study on the losses of predators from five Wyoming ranches. First, let me say 1977 was 19 years ago compared to the current stats that the other panel members gave. Secondly, let me state that 1977 was only a few years after the 1080 ban when the predators hadn't had time yet to build their numbers back to the enormous proportions that they are today. Third, I and every single person I know in the Powder River Basin area can give you stats showing no appreciable losses back in 1977, also. But the last five years or so are a totally different story!!

On our herd of sheep alone, my total herd size has dropped a little over 10% in the last three years, and it has not been by choice. I have not sold more than 3-4% of my ewe lambs which used to be more like 25-35%. Virtually everything has been kept for replacements. Also, we have kept some older ewes longer trying to slow the decline. Still with my atrocious losses, the total herd size is shrinking not to mention the big lamb losses and revenue there too that no one can ill afford to give up. Without some efficient and effective means of predator control soon, I will have to sell what sheep I have left before they are all gone and I am out of business. All of the other control measures talked about at the hearing that day such as guard dogs, M-44 collars, llamas, burros, donkeys, sterilization, etc. are both not effective enough in control and most definitely not very cost effective or efficient enough to be viable alternatives.

Without some help in predator control (not eradication), the whole livestock agriculture community in America and especially the sheep producers, and now as we are even starting to see in lots of other areas of the U.S. , our own lives, especially smaller children, dogs, cats, and household pets (almost members of the family) are at risk of big losses and maybe even being gone. And for what?? The sake of vicious meat-eating, unfeeling and uncaring, murderous thieves that are allowed in our society. Please let's get our priorities straight and have some effective predator control!!

Thank you.

Bob Christensen

NO-WOLF OPTION
COMMITTEE
PO BOX 104, WAPITI, WY. 82450
TEL. 587-5796

April 22, 1996

To: Governor Jim Geringer
The Honorable Alan Simpson
The Honorable Craig Thomas
The Honorable Don Young, Chm., Resources Committee
The Honorable Richard Pombo, Resources Committee
The Honorable Helen Chenoweth, Resources Committee

Please find enclosed a 23 minute video and 19 pages of copies of color photographs taken of grizzly bear depredation to livestock owned by the Walton Ranch, Jackson, Wyoming. Their cattle allotment is on the Bridger-Teton National Forest.

The video and photos were reproduced from originals taken by Terry Schramm, a foreman on the Walton Ranch. His testimony, along with that of Paul Walton's, the ranch proprietor, is also enclosed. This testimony was recently submitted by Mr. Schramm at the Predator Control Hearing held by Representative Barbara Cubin in Gillette, Wyoming on April 5, 1996.

The shocking video and ghastly pictures reveal the true nature of grizzly bear damage to livestock here in Wyoming. Though the Walton Ranch has suffered the most substantial damage and stress to their animals, other ranchers, elsewhere in the state, have suffered grizzly depredations as well.

It is our fervent plea that the enclosed video, photos and testimony be entered into the Official Record to help reconstruct the Endangered Species Act into a law which will benefit and reward the private property owner and lessees of public lands, who must deal with unfunded federal mandates in the name of endangered and threatened species.

Flexibility in the law to protect one's property and full and swift compensation for livestock lost to predators is vital if we are to sustain custom and culture and the economic viability of communities in the west.

We thank each of you. for your courtesy in reviewing the enclosed material and trust it will be given your highest consideration.

Sincerely,

Arlene Hanson

Arlene Hanson

cc: The Honorable Barbara Cubin, Terry Schramm

Enclosures: One (1) 23 Minute Video of Grizzly Damage to Livestock (included in Committee Files)
19 Color Photos of Grizzly Damage to Livestock
Written Testimony Presented at the April 5, 1996 Predator Control Hearing in Gillette, Wy. by Terry Schramm

Predator control laws rapped at hearing

From staff and wire reports

GILLETTE — A Teton County rancher's complaints about the way the federal government handles predator control drew applause Thursday during a congressional field hearing.

Many in the audience appeared to chuckle when panelists opposed to killing predators spoke.

Rancher Terry Schramm said because he must document killings of livestock by predators to receive compensation, he spends most of his time looking for dead animals rather than tending his herd.

"Nobody even calculates in the man-hours I put in looking for these guys," he said. "Nobody's taken into account that livestock have an aversion to being eaten alive. Nobody takes into account the weight loss and stress."

The hearing was sponsored by Reps. Barbara Cubin, R-Wyo., and Jim Saxton, R-N.J., members of the House Subcommittee on Fisheries, Wildlife and Oceans.

Schramm pleaded with the representatives not to pass "laws we can't live with" by tightening predator-control restrictions.

In recent years, the Bureau of Land Management has banned the use of cyanide guns and poison bait on its lands. However, predators like coyotes can be shot and trapped, and pups can be killed in their dens on public lands.

Representatives of conservation groups at the hearing argued against general destruction of predators, but other witnesses said non-lethal controls are not effective enough.

Steven Horn, dean of the University of Wyoming College of Agriculture, said researchers are studying substances to sterilize coyotes or cause them to abort their pups.

But some people at the hearing said when part of the coyote population is destroyed, other coyotes reproduce more to replace the lost numbers.

Congress is not considering predator-control legislation, but Cubin said she would like to see federal predator-control regulations relaxed. Cubin criticized the Wyoming Game and Fish

See PREDATORS Page 10

4/13/96 Wy. Livestock Roundup

Predator, from page 1

Department for what she called a politically motivated lack of tracking predator kills and controlling predators.

Cubin said predation takes an enormous economic toll in Wyoming and elsewhere in the West. Now with the recovery efforts associated with the grizzly bear, bald eagle, and the grey wolf, these costs will undoubtedly continue to rise.

Cubin said she is contacting Carole Browner, the administrator of the EPA, to grant a special use permit for strychnine during calving season for the remainder of this year and next. The permit will help bring the rabid skunk population under control and protect the lives of humans and livestock.

PALM LIVESTOCK CO.
107 EVANS AVE.
P.O. BOX 13
ELK MOUNTAIN, WY 82324
Phone (307) 348-7715
Fax/ Voice (307) 348-7331

April 10, 1996

RE: Testimony on the cost of predators to Palm Livestock Co.

My name is Brad Palm, I am a third generation rancher from Elk Mountain, Wy where my family and I currently run a 4,000 to 5,000 head range sheep operation. We have both Bureau of Land Management Section 3 lands in the checkerboard along the Union Pacific railroad as well as United States Forest Service permits on the Snowy Range of the Medicine Bow National Forest in Southern Wyoming.

Ironically, I started helping manage the sheep on our ranch in 1972, just about the same time as former President Nixon signed an executive order banning the use of compound 1080. With the loss of this and most other predacides I have seen the number of lambs lost on our ranch to predators rise from about 5% in the early seventies to over 21% last year. When I talk about predator losses I'm talking about eagles as well as coyotes and other four legged predators. At least with coyotes we still have some control methods available to try and reduce our losses. With eagles there is no recourse and we are forced to suffer those losses.

We run a range sheep operation. By this I mean we have herders with our sheep and run on open range with very few fences. We time our lambing season to coincide with green grass and warm weather. Because our ranch is in a natural wintering area for eagles we suffer tremendous losses to them during lambing in the early spring. Because a ewe only breeds for six months of

the year and we already breed at the very end of her cycle it is either economically unfeasible or naturally impossible to change when we lamb to avoid eagle depredation. In the mid-seventies the United States Fish and Wildlife Service did some depredation studies on our ranch to study coyotes. They had a graduate student there for three lambing seasons doing nothing but counting dead lambs and determining what was the cause of death. Although it was never published, in conversations with him he said that eagles were killing as many lambs as coyotes at that time. Since then the situation has only worsened. It has gotten to the point that last winter I lost several full grown ewes to eagles and two years ago even a two month old great pyrenees guard dog pup.

We have our own airplane and my son and I do much of our own predator control with it. In the fifteen years that we have been using the plane for predator control I have logged 688 hours and taken 1449 coyotes. This doesn't include the coyotes the federal trapper has taken off the ranch as well. As you can see from the enclosed, **table one**, even removing that many coyotes I still lose from 11% to 26% of my lamb crop annually. This gives you some idea of the predator population densities we have in Wyoming and why they are such an economic burden.

Most of the discussion so far has centered around our base property since this is where the sheep spend most of the year. I have included two pages, **table two**, showing actual counts and losses on our forest allotments since 1986. I would call your attention to the last four columns of this table. These are the ewe and lamb losses and the percent that they represent of the total number. The percentage of ewes lost has remained fairly constant, between one and two percent. One percent is a normal loss to natural causes for both ewes and lambs. Those years where we have lost more than one percent of the ewes are when we have had bear problems. The percent of lamb losses on the other hand

have shown a steady increase since 1986 with the exceptions of 1990 and 1991. These are the first two years we had guard dogs with our bands. We are still using guard dogs but, as you can see from the loss figures, the coyotes have learned how to outsmart the dogs and have continued to kill. This illustrates the problem with non-lethal control methods. Unless there is some viable form of population control to reduce predator populations to a manageable level, non-lethal methods will not work.

Our forest allotments range in elevation from 9,500 feet to above 11,000 feet. The terrain is rugged and in many places heavily forested. Added to that is a "Scenic Byway" running through the middle of them. Because of the ruggedness of terrain and the high recreation use, most available predator control methods are either impractical or are not allowed by the Forest Service. Because of the high predator losses suffered on the forest over the last three years I, for the first time in my life, chose not to go to the forest last summer. Thanks to good spring moisture on the ranch I had enough forage to remain there all summer. By remaining on the ranch I was able to reduce the overall predator loss 4% and the after docking loss was cut from 18.5% to 9.5%.

Over the years I have tried almost every type of non-lethal predator control method that has been developed. I have tried taste and smell aversion methods, as well as scare devices and guard animals. Most methods have proven unsuccessful. Guard dogs are relatively successful but only when predator populations are at manageable levels. However, none of the non-lethal method has had any effect on eagle predation.

In 1988 Palm Livestock Co., in cooperation with the University of Wyoming and Colorado State University, did a pregnancy study on sheep using an ultrasound. This machine is much the same as doctors use to determine pregnancies and sex of infants in women. The

purpose of the study was to determine the actual number of lambs my ewes were carrying prior to birth. Using the ultrasound we were able to count the actual number of fetuses the ewes were carrying. What we determined was that of the 6,849 ewes tested they were carrying 8,164 lambs. This equates to a 125% lamb crop to be born. The results of this test confirmed what my father had determined years prior by shed lambing some of our ewes.

The enclosed **table one** is a summary of the past 11 years. It makes the assumption that each year we had a 125% lamb crop carried in the ewes. For ease of illustration I have averaged the death loss and lamb values over the entire period. Column #2 is the ewe count prior to lambing. Column #3 is the potential number of lambs that would be born. Column #4 is the number of lambs that I expected to lose to natural causes; weather, birthing problems, etc. I have used an average of 25% over the entire period. Some years this would be high, other years it would be low. However, I believe it is a very conservative figure.

Column #5 is the number of lambs docked. This is the first actual count we have on the number of live lambs. Docking normally occurs about one month after lambing begins. This first month of birth is the most critical and dangerous for lambs. A severe storm during lambing can cause tremendous losses to new born lambs. It is also the period when we suffer the highest losses to eagles. The lambs are small and extremely vulnerable. Because we are forced to lamb in early spring, we still have a number of transient eagles in the area that migrate later. As I stated earlier in my testimony, because of natural and economic factors we are unable to avoid lambing during this time of year.

Column #6 is the actual number of lambs weaned in the fall during shipping. Most years we keep around 20% of the ewe lambs to replenish our herd and the rest are either sold directly or are sent to a feedlot where

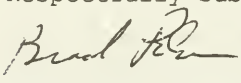
they are fattened and sold later.

Column #7 is the number of lambs that I believe predators have killed. I arrived at this figure by subtracting columns #4 and #6 from column #3. Column #8 is the amount of loss to predators expressed as a percentage. I arrived at this number by dividing column #8 by column #3.

Column #9 is the dollar value of lambs lost to predators. I have used $60.00 per head as an average gross value of those lambs over the 11 years. This is just an average but the total dollar loss over the 11 years would be approximately the same if I used the actual dollar amount received each year.

When I start adding up what predators have cost my ranch the sum is staggering, not only with the value of sheep and lambs lost, but also the cost of the various control methods. This includes the cost of guard dogs and the dogfood to feed them, the hourly cost of the airplane, and the cost of supporting a county predator control program. By its actions the Federal Government has cost my ranch well over a million dollars since 1985. By its actions I mean the ban on compound 1080 and most other predacides, protection of the golden eagle under the Bald Eagle Protection Act, and the governments failure to carry out the mandates of the Animal Damage Control Act. Over the past twenty years I have seen these actions force most of my neighbors out of the sheep business. Unless the Federal Government is willing to either compensate me for losses or actually follow its own mandates, I may soon be forced out of business as well.

Respectfully Submitted



Brad Palm, President
Paqlm Livestock Co.

ESTIMATED PREDATOR LOSSES BASED ON 1988 ULTRASOUND TESTS OF PALM LIVESTOCK CO. EWES

#1 YEAR	#2 EWE COUNT	#3 125% LAMB CROP	#4 25% DEATHLOSS NON-PREDATOR	#5 LAMBS DOCKED	#6 LAMBS WEANED	#7 PREDATOR LOSS	#8 PREDATOR LOSS AS %	#9 VALUE OF PREDATOR LOSS
1985	9617	12,021	3,005	7426	6958	2,058	17%	$123,476.25
1986	8,676	10,845	2,711	5,699	5,287	2,847	26%	$170,805.00
1987	8,286	7,858	1,964	4,941	4,641	1,252	16%	$75,127.50
1988	6,849	8,561	2,140	4,725	4,737	1,684	20%	$101,036.25
1989	7,705	9,631	2,408	6,137	5,621	1,602	17%	$96,146.25
1990	8,122	10,153	2,538	8,695	6,512	1,102	11%	$66,142.50
1991	7,853	9,816	2,454	6,772	6,312	1,050	11%	$63,011.25
1992	4,813	6,016	1,504	3,079	2,928	1,584	26%	$95,051.25
1993	2,310	2,888	722	1,802	1,603	563	19%	$33,757.50
1994	4,274	5,343	1,336	2,975	2,626	1,381	26%	$82,852.50
1995	3,843	4,804	1,201	2,614	2,534	1,069	22%	$64,128.75
TOTALS	70,348	87,935	21,984	47,639	47,225	18,726	21%	$971,535.00

TABLE NUMBER 1

SHEEP & LAMB LOSSES ON PALM LIVESTOCK CO. FOREST ALLOTMENTS

1986

MOUNTAIN BANDS-ON				MOUNTAIN BANDS-OFF		LOSS		PERCENTAGE LOSS	
EWES	LAMBS	%AGE	ALLOTMENT	EWES	LAMBS	EWES	LAMBS	EWES	LAMBS
977	915	0.94	Nelson Park	1,030	890	53	-25	5%	-3%
1,149	1,051	0.91	Libby Flat	933	851	-216	-200	-19%	-19%
1,062	1,053	0.99	Libby Flat	1,126	981	64	-72	6%	-7%
913	858	0.94	Sheep Lake	1,110	1,074	197	216	22%	25%
926	916	0.99	Headquarters Park	911	874	-15	-42	-2%	-5%
943	913	0.97	Reservoir Lake	808	751	-135	-162	-14%	-18%
5,970	5,706	0.96		5,918	5,421	-52	-285	-1%	-5%

1987

MOUNTAIN BANDS-ON				MOUNTAIN BANDS-OFF		LOSS		PERCENTAGE LOSS	
EWES	LAMBS	%AGE	ALLOTMENT	EWES	LAMBS	EWES	LAMBS	EWES	LAMBS
725	765	1.06	Headquarters Park	711	709	-14	-56	-2%	-7%
839	863	1.03	Libby Flat	824	817	-15	-46	-2%	-5%
856	963	1.13	Nelson Park	820	902	-36	-61	-4%	-6%
907	1,025	1.13	Libby Flat	894	990	-13	-35	-1%	-3%
868	883	1.02	Sheep Lake	862	831	-6	-52	-1%	-6%
452	447	0.99	Reservoir Lake	435	422	-17	-25	-4%	-6%
4,647	4,946	1.06		4,546	4,671	-101	-275	-2%	-6%

1988

MOUNTAIN BANDS-ON				MOUNTAIN BANDS-OFF		LOSS		PERCENTAGE LOSS	
EWES	LAMBS	%AGE	ALLOTMENT	EWES	LAMBS	EWES	LAMBS	EWES	LAMBS
931	969	1.04	Libby Flat	895	910	-36	-59	-4%	-6%
947	910	0.96	Libby Flat	888	852	-59	-58	-6%	-6%
865	1,126	1.30	Sheep Lake	800	907	-65	-219	-8%	-19%
796	867	1.09	Nelson Park	818	843	22	-24	3%	-3%
1,157	1,138	0.98	Headquarters Park	1,307	1,234	150	96	13%	8%
1,456	Dry/Yrlg		Trail Creek	1,181		-275	0	-19%	ERR
1,243	Dry/Yrlg		Reservoir Lake	1,183		-60	0	-5%	ERR
1,230	Dry/Yrlg		Copper King	1,382		152	0	12%	ERR
8,625	5,010	1.07		8,454	4,746	-171	-264	-2%	-5%

1989

MOUNTAIN BANDS-ON				MOUNTAIN BANDS-OFF		LOSS		PERCENTAGE LOSS	
EWES	LAMBS	%AGE	ALLOTMENT	EWES	LAMBS	EWES	LAMBS	EWES	LAMBS
926	967	1.04	Libby Flat	955	974	29	7	3%	1%
1,014	980	0.97	Headquaters Park	1,068	954	54	-26	5%	-3%
846	919	1.09	Reservoir Lake	691	700	-155	-219	-18%	-24%
1,022	1,046	1.02	Nelson Park	1,020	936	-2	-110	-0%	-11%
1,113	1,141	1.03	Libby Flat	1,073	1,105	-40	-36	-4%	-3%
1,058	1,076	1.02	Sheep Lake	1,024	1,020	-34	-56	-3%	-5%
1,152			Copper King	1,140		-12	0	-1%	ERR
1,656			Trail Creek	1,652		-4	0	-0%	ERR
8,787	6,129	1.03		8,623	5,689	-164	-440	-2%	-7%

TABLE NUMBER 2

SHEEP & LAMB LOSSES ON PALM LIVESTOCK CO. FOREST ALLOTMENTS

1990

MOUNTAIN BANDS-ON EWES	LAMBS	%AGE	ALLOTMENT	MOUNTAIN BANDS-OFF EWES	LAMBS	LOSS EWES	LAMBS	PERCENTAGE LOSS EWES	LAMBS
967	1,068	1.10	Nelson Park	892	979	-75	-89	-8%	-8%
886	928	1.05	Sheep Lake	704	762	-182	-166	-21%	-18%
947	1,064	1.12	Libby Flat	1,004	1,089	57	25	6%	2%
938	968	1.03	Headquarters Park	871	852	-67	-116	-7%	-12%
844	929	1.10	Reservoir Lake	843	874	-1	-55	-0%	-6%
947	1,050	1.11	Libby Flat	1,130	1,269	183	219	19%	21%
1,601	54	0.03	Trail Creek	1,580	32	-21	-22	-1%	-41%
1,258	20	0.02	Copper King	1,256	14	-2	-6	-0%	-30%
8,388	6,081	0.72		8,280	5,871	-108	-210	-1%	-3%

1991

MOUNTAIN BANDS-ON EWES	LAMBS	%AGE	ALLOTMENT	MOUNTAIN BANDS-OFF EWES	LAMBS	LOSS EWES	LAMBS	PERCENTAGE LOSS EWES	LAMBS
1,095	1,168	1.07	Nelson Park	1,100	1,100	5	-68	0%	-6%
964	1,042	1.08	Libby Flat	1,021	1,053	57	11	6%	1%
1,022	1,165	1.14	Libby Flat	996	1,083	-26	-82	-3%	-7%
979	1,066	1.09	Sheep Lake	969	1,070	-10	4	-1%	0%
1,173	1,131	0.96	Headquarters Park	1,134	1,184	-39	53	-3%	5%
1,156	1,200	1.04	Reservoir Lake	1,089	1,078	-67	-122	-6%	-10%
6,389	6,772	1.06		6,309	6,568	-80	-204	-1%	-3%

1992

MOUNTAIN BANDS-ON EWES	LAMBS	%AGE	ALLOTMENT	MOUNTAIN BANDS-OFF EWES	LAMBS	LOSS EWES	LAMBS	PERCENTAGE LOSS EWES	LAMBS
930			Nelson Park	925	10	-5	10	-1%	ERR
1,116	965	0.86	Libby Flat	1,114	919	-2	-46	-0%	-5%
987	901	0.91	Sheep Lake	947	869	-40	-32	-4%	-4%
1,223	1,167	0.95	Headquarters Park	1,195	935	-28	-232	-2%	-20%
4,256	3,033	0.71		4,181	2,733	-75	-300	-2%	-10%

1993

MOUNTAIN BANDS-ON EWES	LAMBS	%AGE	ALLOTMENT	MOUNTAIN BANDS-OFF EWES	LAMBS	LOSS EWES	LAMBS	PERCENTAGE LOSS EWES	LAMBS
1,037	1,108	1.07	Headquarters Park	984	974	-53	-134	-5%	-12%
790	694	0.88	Reservoir Lake	812	690	22	-4	3%	-1%
1,827	1,802	0.99		1,796	1,664	-31	-138	-2%	-8%

1994

MOUNTAIN BANDS-ON EWES	LAMBS	%AGE	ALLOTMENT	MOUNTAIN BANDS-OFF EWES	LAMBS	LOSS EWES	LAMBS	PERCENTAGE LOSS EWES	LAMBS
786	688	0.88	Nelson Park	732	599	-54	-89	-7%	-13%
1,031	973	0.94	Libby Flat	1,034	857	3	-116	0%	-12%
1,277	590	0.46	Sheep Lake	1,194	529	-83	-61	-6%	-10%
1,064	688	0.65	Headquarters Park	1,160	622	96	-66	9%	-10%
4,158	2,939	0.71		4,120	2,607	-38	-332	-1%	-11%

TABLE NUMBER 2

People for the West!
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Fighting for America's Communities

April 19, 1996

STATEMENT FOR THE RECORD
House Resources Subcommittee on Fisheries, Wildlife and Oceans,
Predator Control in the State of Wyoming.
Submitted by Dru Bower, Wyoming Field Director, People for the West

People for the West is a national, non-profit, grassroots organization dedicated to balancing environmental protection with economic growth. With more than 20,000 members nationwide, PFW has seven organized chapters and hundreds of members throughout Wyoming. Our membership is concerned with recent adversarial campaigns to hinder the traditional multiple use law of the land and consequences to private property rights, public lands access and natural resource production.

This public comment is submitted to express our concern with the fact that predator control practices in the State of Wyoming are coming under fire from certain interest groups. Wyoming needs an effective predator control program. Ranching is a vital part of the state's economy and our ranchers must be protected from devastating predator losses.

The Animal Damage Control program is necessary, but needs to be reformed to protect livestock producers and not tie their hands with excessive government over-regulation.

Wyoming's livestock are threatened by numerous predators within the boundaries of the State of Wyoming, including, but not limited, to coyotes, red foxes, black bears, mountain lions, grizzlies, bobcats, and soon, wolves (with the federal Endangered Species Act/wolf reintroduction program now in full swing). Not only do predators affect livestock populations but also the economic well-being of cattle ranchers and sheep producers throughout the state.

Sheep producers have documented losses exceeding $4 million annually from various predators -- especially coyotes. And although cattlemen don't track such financial losses, their cattle and horses are also victims of predators on a daily basis. Add to that financial impacts on individual livestock producers from predator control taxes and costs of legal predator control methods and it is easy to see that controlling predators is not just a drop in the bucket.

Financial losses do not only affect livestock producers but America's economy as a whole. Estimates that 2.5 million head of sheep alone were killed by predators between 1990-1995 translates into the loss of $153 million annually to the economy, and nearly 8,000 jobs formerly held by ranchers and farmers who were subsequently driven out of business.

Predator control programs need extensive scrutiny so our nation's livestock producers are armed with the best deterrents available and are compensated for their losses. By all indications, the federal government has effectively tied the hands of livestock producers trying to maintain healthy and safe herds.

The U.S. Environmental Protection Agency registered the use of M-44 toxicant in the late 1970s, but put more than 20 restrictions on it, making it nearly useless. Coyote getters such as sodium monofluoroacetate (1080) had an effective rate between 85 and 100 percent. The EPA banned its use along with use of other toxicants on federal public lands in the early 1970s. Millions of taxpayer dollars have been spent on research of alternative methods, but M-44 and the toxic collar (both more than 25 years in existence), are the only signs of progress made in the area of predator control.

Now aerial shooting, trapping and snares are being targeted for more government regulation with no sound solution or sound alternative being introduced.

It should be noted that while hunters and trappers are allowed licensure for trophy animals -- bobcats, grizzlies, black bears and mountain lions -- property owners have no recourse because of the Endangered Species Act which protects some of the volatile predators. In that respect, livestock producers have their hands tied completely. We believe the Animal Damage Control program reform must also re-define predators and list specific recommendations for livestock producers to adhere to while controlling predators.

And while we believe the federal government should play an active role in administration of predator control programs, we think state predator control personnel in local areas are better equipped to handle day-to-day operations.

It should be remembered that predators also prey on wildlife -- while sheep and cattle are easy prey, the danger also applies to antelope, deer, elk and birds. An effective control program will help ensure healthy wildlife populations remain in this beautiful state.

Nearly $300 million is spent in the state each year by recreationists enjoying the bounty of the land, so the depletion of wildlife by uncontrolled predation adversely impacts the state's economy in an additional way.

Selective and safe methods must be pursued in order to protect both livestock and wildlife. It's a serious problem that needs to be seriously tackled. With more funding and manpower, (only $36 million was appropriated in fiscal year 1995), the predator control program should continue in an environmentally safe and economically sound manner.

Thank you.

OCT 1 2 1981

Sodium Monofluoroacetate (1080): Relation of Its Use to Predation on Livestock in Western National Forests, 1960-78.

GREGORY W. LYNCH AND ROGER D. NASS

Abstract

Concern over certain animal damage control methods used by the U.S. Fish and Wildlife Service (USFWS), primarily the predacide Compound 1080, prompted a Presidential Order in 1972 banning the use of toxicants on public lands. This continuing ban of 1080 use has been reinforced by the recent policy address issued by the Secretary of the Interior. Following the initial ban, greater emphasis was placed on aerial hunting of coyotes for prevention and correction of damage to sheep and goats. Aerial hunting is expensive, however, and has only limited application in timbered, mountainous areas of many national forests. In the period since toxicants were banned, number of grazing livestock reported as lost to predation on western national forests has increased. Numbers of toxic bait stations (1080) used throughout the West, from 1960 until the 1972 ban, showed a strong inverse relationship with numbers of livestock reported lost to predation on national forests during these same years.

Use of predacides in the Animal Damage Control (ADC) program of the U.S. Fish and Wildlife Service (USFWS) has often been criticized because efficacy and safety data were limited or lacking. The most frequently criticized predacide is Sodium Monofluoroacetate (1080). Although the use of 1080 had been declining since at least the early 1960's, an Executive Order issued by President Nixon in 1972 immediately stopped further use of this and other predacides on public lands. Reinforcement of this ban on 1080 use and research was recently accomplished by an ADC Policy Statement issued by the Secretary of the Interior.

One result of the 1972 ban was the increased use of aircraft for predator control. If predacides are restricted from use indefinitely, aerial control provides the best economic alternative (Gum et al. 1978). Cain et al. (1972) rated aerial hunting as "very good" in effectiveness for problem solving, safety, and lack of adverse environmental impact. Also, a telephone survey by Arthur et al. (1977) showed that aerial hunting is more acceptable to the general public than are the slow-acting predacides. Aerial hunting is species selective and may often be selective for the depredating individual.

Evans and Pearson (1977) showed that the reported number of coyotes taken by ADC personnel generally rose during 1972-76 and that the percentage of these animals taken from aircraft greatly increased (Fig. 1). Most coyotes taken earlier with predacides were not recovered; consequently, the increase in numbers of coyotes reported taken in the ADC program since 1972 is probably a reflection of increased use of methods that lead to the recovery of animals, rather than an increase in numbers of animals killed.

Though aircraft may be an effective (albeit expensive) replacement for predacides in certain high-country meadow grazing areas, their effectiveness is sharply reduced in timbered, mountainous areas that make up a significant portion of the national forests. Consequently, even the increase in the aerial damage control since the 1972 predacide ban has not reduced, or even held constant, the losses of sheep on national forests. On the contrary, losses may have increased because 1080, which was frequently used in mountainous regions, was not replaced with an equally effective control measure in these areas. Comparison of expanded aerial control, number of 1080 bait stations used in the West, and the reported loss of sheep and goats to predation on the Forest Service lands is shown in Figure 2.

Fig. 1. *Percentage of coyotes taken by ADC personnel using aircraft (from Evans and Pearson 1977).*

Methods and Discussion

Sheep and goat losses were tabulated from 1960 through 1978 to determine whether significant differences occurred after the 1972 predacide ban. Information available from the U.S. Forest Service is more detailed than that from any other source for comparing losses of livestock (goats, as well as sheep, are included in the reported number of animals grazed on the national forests, but the number of goats is so small that it can be ignored in calculations). The animals are counted when they are released onto the forest land each summer, and again when they are removed in the fall. The difference in the two counts is the number of animals lost to predation, weather, toxic plants, and other causes.

Wagner (1972) reported the Forest Service estimated levels of predator losses during the summer grazing season on the national forests ranged between 0.4 and 1.5 percent. Even while the use of 1080 was decreasing during 1960-72, the number of sheep lost to predators on the forests in the West was increasing (Table 1). These increasing losses occurred during an almost steady reduction in the numbers of sheep being grazed. Also, since grazing seasons on the forested areas are usually short, these losses of up to 1.5 percent were concentrated in time. Grazing time varied in 1972 from 0.7 to more than 11 months but averaged only 2.5 months in 68 national forests in the 17 western States (Pearson 1972). Losses suffered

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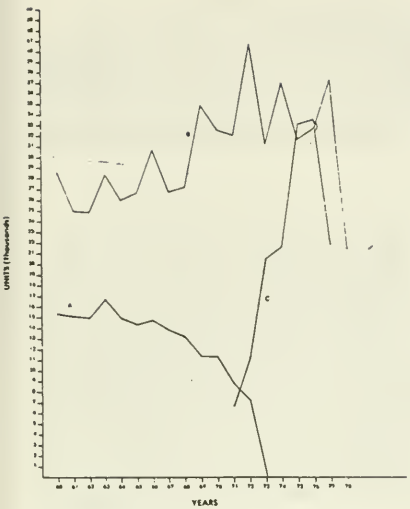

Fig. 2. *Relationships among (A), the number of 1080 bait stations placed throughout the West (from Cain et al. 1972, and Orvis Gustad, Joe Packham, and George Rost, senior staff specialists in Regions 6, 1, and 2, respectively, USFWS, personal communication), (B), the number of sheep and goats reported lost to predators on the national forests (from Gee et al. 1977, and Jerry Austin, computer specialist, U.S. Forest Service, Washington, D.C., personal communication), and (C), the number of coyotes taken by ADC personnel with aircraft (from Evans and Pearson 1977).*

during the summer grazing on the forests are in addition to the heavy losses that occur during and immediately after the lambing season in late winter and early spring (Gee et al. 1977).

Another study outlining losses reported by livestock raisers to Forest Service officials showed that during 1956-71 the loss rate to predators never exceeded 1.9 percent (Gee et al. 1977). This loss rate essentially agrees with that reported by Wagner (1972). From 1972 through 1978, after the predacide ban, the reported losses from the national forests were never less than 1.7 percent and ranged up to 2.5 percent.

Lambs grazed on the national forests are nearing market size and represent a maximum investment for the rancher, in both time and money. These animals have survived the more critical early-age period when most losses occur. Obviously, predation losses of lambs during this period have a greater potential economic impact on the livestock operation than do the early-season losses.

The Forest Service data, reported as the number of animals grazed, includes only those over 6 months old. However, the number of animals reported lost to predation includes all animals, and most of these are lambs (less than 6 months old) on the summer range. A halving of the percentage of animals officially reported lost to predation may more accurately reflect the losses incurred during the summer grazing season. Partly offsetting this reporting difference is the possibility that many losses reported as "unknown cause" are the result of predation.

A linear regression was calculated on the number of 1080 bait stations placed throughout the West (X) and the percentage of sheep reported lost to predation on the national forests (Y) in U.S. Forest Service Regions 1 through 6, for the 13 years (1960-72) immediately preceeding the predacide ban (Fig. 3). The coefficient of determination (r^2) in this test is 0.86. While the number of 1080 bait stations decreased, the percentage of sheep reported lost to predation on national forests increased.

Some of the initial reports may, in part, reflect dissatisfaction with the predacide ban. The last of the 1080 bait stations were removed in the spring of 1972 and the effect of the baiting should have lasted through the summer grazing season. However, the reported losses in 1972 were almost 27% higher than those in 1971. Even discounting this possible one-time emotional reaction, the annual percentage losses reported in 5 of the 6 years from 1972 to 1977 were greater than the highest reported before 1972. In 1978, a year that saw a much lower level of predation than the 6 previous years, the percentage of animals reported lost to predators was still

Table 1. Total number of 1080 bait stations, sheep and goats grazed, and losses attributed to predation on national forests, Regions 1-6, 1960-78.

Year	Number of 1080 stations[1]	Number of sheep and goats grazed[2]	Sheep and goats reported lost to predation	
			Number[2]	Percent of total animals
1960	15,349	2,531,000	28,500	1.1
1961	15,173	2,436,000	25,000	1.0
1962	15,079	2,334,000	24,900	1.1
1963	16,692	2,231,000	28,400	1.3
1964	15,017	2,158,000	26,100	1.2
1965	14,417	2,025,000	26,700	1.3
1966	14,665	2,027,000	30,700	1.5
1967	13,930	1,941,000	26,800	1.4
1968	13,260	1,879,000	27,200	1.4
1969	11,423	1,828,000	35,000	1.9
1970	11,373	1,741,000	32,600	1.9
1971	8,914	1,696,000	32,100	1.9
1972	7,289	1,652,000	40,700	2.5
1973	0	1,598,000	31,300	2.0
1974	0	1,470,000	37,000	2.5
1975	0	1,549,000	31,800	2.1
1976	0	1,749,777	32,879	1.9
1977	0	1,472,561	37,442	2.5
1978	0	1,283,672	21,457	1.7

[1]Information for 1960-70 is Cain et al. (1972). Data from 1971 and 1972 comes from Orvis Gustad, Joe Packham, and George Rost, senior ADC staff specialists, USFWS Regions 6, 1, and 2, respectively, personal communications.

[2]Data for 1960-75 are from Gee et al. (1977) and those from 1976-78 are from Jerry Austin, computer specialist, U.S. Forest Service, Washington, D.C., personal communication.

Fig. 3. *Number of 1080 bait stations used (thousands) in relation to reported losses of sheep and goats to predation on western national forests, 1960–72 (r^2=–0.86).*

greater than in all but 3 years from 1960–71.

Concentration of effort in the ADC program was redirected in favor of aerial hunting after the ban of predacide use on public lands. Although the percentage of predators taken by ADC personnel using aircraft has increased, most ranchers believe that better protection of livestock was achieved with predacides. A comparison of reported losses before and after the predacide ban adds weight to this belief. Although other factors such as high fur prices may be affecting losses on national forests, there was an inverse relationship between the number of bait stations used and livestock losses.

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Sheep Losses on Selected Ranches in Southern Wyoming

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Highlight: To help resolve conflicting claims about the severity of predator losses to the sheep industry, sheep losses from all causes were assessed during 1973–75 in five southern Wyoming ranches. Although herd sizes varied seasonally and yearly, about 6,000 ewes and their lambs were monitored each year during spring lambing and the summer and winter grazing seasons. Most of the sheep were tended by herders. Lamb loss was greater than ewe, and spring losses were always greater than summer and winter losses combined. Of 4,440 dead sheep examined, predators killed 1,030 or 23%. Although predation was the largest single cause of death for lambs (24%), weather-related losses such as deaths from exposure, starvation, accidents or disease, if combined, would probably have been higher. Disease killed the most ewes (26%), with predation the second most important cause of death (18%). Of the deaths from predation, coyotes caused 77%, black bears 11%, and golden eagles 9%. During the 3 years, known predator kills were 0.2% of the ewes each year and 1.5%, 2.1%, and 3.2%, respectively, of the lambs from the study herds. There were 1,235 ewes and lambs missing, mostly after the summer season, mainly due to miscounting and loose management from one ranch.

The conflict between sheep producers and their critics over the loss of sheep to predators, chiefly coyotes (*Canis latrans*), has opened a credibility gap of major proportion. The sheep industry states that predator losses are severe and that it cannot survive without effective predator control. Opponents believe that the predator losses claimed by sheepmen are exaggerated, control practices pose problems of environmental contamination, predators are public property and have positive social value, and predator management should stem from a basis broader than control alone.

Although not supported by unchallengeable data, evidence from the Cain Committee (Cain et al. 1972) suggested that predator control in some areas may not be as effective as popularly believed, the predation rate may not be density dependent, and predation on sheep may not be as great as commonly thought. One of the Committee's recommendations was to ban all existing toxic chemicals for use in operational predator control, and this was among the steps implemented by Federal Executive Order 11643 in 1972. The Cain Committee also recommended a long-term research program based in the Division of Research, U.S. Fish and Wildlife Service, which would provide information on the ecological problems associated with predators, including the actual livestock losses they caused. Subsequently, the Service's Denver Wildlife Research Center was charged with the responsibility for this and other predator research. This article reports the findings of one of the resulting investigations: a 3-year field study to determine the magnitude and causes of sheep loss during range operations in the mountain West.

Methods

This study was conducted from April 1973 through December 1975 on five sheep ranches based in Carbon and Sweetwater counties, Wyoming. One

Fig. 1. *A lamb that was attacked by a coyote but not killed. The lesions were so serious that the lamb could not have lived and it was subsequently killed by the rancher.*

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herd, chosen by the rancher, was studied on each ranch, but only three were followed for the entire period. Ranch C was dropped from the study in April 1975 for lack of project personnel; Ranch A went out of business in April 1975, and a second herd from Ranch D (Herd D-2) was followed during the rest of 1975.

Ranch Operations and Husbandry Practices

Range sheep operations have been developed for use in the vast desert and mountain areas of the West. Since the land is semiarid and forage tends to be sparse, grazing must extend over considerable areas. Large tracts of public land, often leased for grazing, are interspersed with private land, and relatively little of it is fenced. In response to these conditions the five ranchers in the study, like most in the area, used sheepherders to tend their herds (one ranch, B, used herders only in the summer), lambed on the range rather than in a shed, and had separate winter and summer grazing ranges, much of it on public lands.

The ranchers' crossbred ewes were predominantly of the fine-wooled Rambouillet and medium-wooled Columbia breeds. Suffolk and Hampshire rams were sometimes used to improve the meat quality of lambs. Various types and intensities of predator control were used for all herds throughout the study; project personnel neither assisted nor interfered with it.

From about October through June, sheep were grazed and lambed in the semiarid rolling plains and foothills averaging about 2,000-m elevation. In this area, precipitation (mostly summer rain) ranges from 13- to 31-cm a year, and the vegetation is dominated by big sagebrush (*Artemisia tridentata*), but depending on the elevation, exposure, and soil type, other woody plants occur, including juniper (*Juniperus scopulorum*), aspen (*Populus tremuloides*), saltbush (*Atriplex* sp.), greasewood (*Sarcobatus vermiculatus*), serviceberry (*Amelanchier alnifolia*), bitterbrush (*Purshia tridentata*), mountainmahogany (*Cercocarpus montanus*), Gambel oak (*Quercus gambellii*), and chokecherry (*Prunus virginianus*). The dominant grasses are western wheatgrass (*Agropyron smithii*), Junegrass (*Koeleria cristata*), Indian ricegrass (*Oryzopsis hymenoides*), Sandberg bluegrass (*Poa secunda*), and needleandthread (*Stipa comata*). Important forbs are umbrella plant (*Eriogonum* sp.), biscuitroot (*Lomatium* sp.), phlox (*Phlox* sp.), and scarlet globemallow (*Sphaeralcea coccinea*). Poisonous or noxious plants present are woody aster (*Aster xylorrhiza*), halogeton (*Halogeton glomeratus*), vetch (*Astragalus* sp.), death camas (*Zygadenus* sp.), and greasewood. The area's characteristic strong winds promote evaporation and increase the severity of winter storms but also permit winter grazing by blowing snow from the ridges.

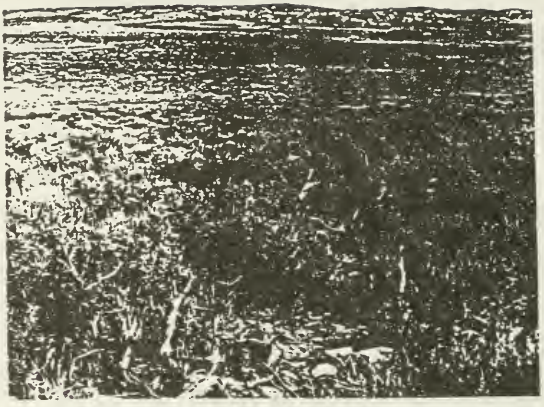

Fig. 2. *Typical vegetation in the fall, winter, and spring sheep ranges in southern Wyoming. It is dominated by big sagebrush.*

During July through September, sheep grazed mountain allotments in the Medicine Bow and Routt National Forests. Elevations in the area range from about 2,150 to 3,650 m, and the climate and vegetation vary accordingly. In general, sheep were grazed in montane habitat, where stands of conifers and other trees are interspersed with hillsides and meadows. The vegetation is quite variable, with extensive areas of lodgepole pine (*Pinus contorta*), aspen, Gambel oak, alpine fir (*Abies lasiocarpa*), and Engelmann spruce (*Picea engelmannii*), interspersed with meadows and hillsides containing big sagebrush, timothy (*Phleum pratense*), hairgrass (*Deschampsia* sp.), sedge (*Carex* sp.), bluegrass (*Poa* sp.), Idaho fescue (*Festuca idahoensis*), needlegrass (*Stipa* sp.), bromegrass (*Bromus* sp.), mulesears (*Wyethia amplexicaulis*), dandelion (*Taraxacum* sp.), geranium (*Geranium* sp.), as well as less important forage species.

One herd of sheep grazed in the subalpine and alpine tundra in 1975. Knight et al. (1975) referred to the vegetative cover as alpine turf, which occurs in open areas and is predominantly bluegrass, alpine avens (*Geum rossii*), alpine sagewort (*Artemisia scopulorum*), sedges, rushes (*Juncus* sp.), Parry clover (*Trifolium parryi*), and dandelion. Willows (*Salix* sp.) are found along the streams.

Range lambing began by forming herds of about 1,000 to 2,000 ewes as they left the shearing pens in late April or early May. Except on Ranch B these herds were tended by herders throughout lambing. The sheep usually bedded near the sheep camp at night and in the morning the main herd was moved away from the ewes that had lambed during the night (the drop bunch). This procedure began about May 10 and continued until about 500 ewes had lambed. The ewes and their lambs were then gathered so the lambs could be tail-docked and marked and the males castrated. This docking operation was the first accurate count of lambs. After the first docking, a second series of

drop bunches was started from the main herd until a band of 500 was gathered and the lambs docked. These two bands made up a lambing herd of about 1,000 ewes and their lambs. Remaining ewes that had not yet lambed were put with the late-lambing ewes from other herds to make up the late-lambing herd.

On Ranch B, the lambing herd was placed in a fenced 2,000 ha pasture and allowed to graze, bed, and give birth unattended. Some sheepmen use this method because of the difficulty of obtaining competent herders and because the range is utilized better by unherded sheep.

In this study, the entire lambing herd was monitored until the late-lambing and dry ewes were separated, and then the herd of early-lambing ewes and their lambs was followed. This herd usually maintained its identity through the summer and shipping, but a few summer herds were composed of animals from several lambing herds, thus changing the number and individual sheep being monitored.

After the summer herds were formed in June or July they were driven to the summer range (about a week's trip) in the mountains or occasionally were hauled there by truck. In September, the sheep were driven off the summer range to the shipping point. Then in early October, the lambs (except replacement ewes) were separated and shipped either to a farming area for further fattening or directly to market. The remaining winter herds of about 2,000 ewes and replacement ewe-lambs were formed and driven to the winter range. Rams were put with the ewes for breeding from about mid-December to about February 1. The ewes grazed on the winter range until shearing, after which they were moved to the lambing ground, completing the annual cycle.

Project personnel made a concerted effort to interfere as little as possible with routine ranch activities so that the normal operation of the ranch would continue (it was particularly important not to disturb ewes with newborn lambs), and so that predation patterns would not be changed.

Although a few counts of sheep herds were made for the purpose of this study, most were scheduled to coincide with ranch operations. Usually the first count in the calendar year was at shearing in late April or early May when the lambing herds were formed. Other counts were made when the lambs were docked and marked, when sheep were moved to the summer range, as they left the summer range, and again when the lambs were shipped in October. The other regularly scheduled count took place in late November or early December when the wool around the sheep's eyes was sheared. Because of the difficulty of counting large numbers of sheep, any herd count where two individuals counted within five or ten animals of each other was considered good. Two persons usually counted the sheep as a precaution against error.

In 1973, each technician lived in the closest town and tried to monitor two herds; this proved unsatisfactory because too little time could be spent with each herd. In subsequent years one man was assigned to each herd and given a small camp trailer so he could live near the herd and move with it in spring and summer. During the spring lambing season, technicians generally worked from dawn to dusk, 6 days a week, and when possible another observer searched on the seventh day. Herds on summer ranges were monitored 5 days a week, as were the winter herds except on Ranch B, if weather permitted. The Ranch B herd was not monitored in winter because ewes from several herds were placed together, unherded, in a 5,200-ha pasture where accurate surveillance was impossible.

On each working day, the technician searched the area for dead sheep, generally on horseback. Horses provided good visibility as well as mobility, and since they are a common part of ranch operations, were unlikely to affect predation. While the technician was responsible for the searches, any reports of dead sheep by herders, ranchers, or others were investigated. During winter, when horses could generally not be hauled to the grazing areas because of bad weather and road conditions, herders provided much information to aid in finding dead animals.

Mortality and Productivity Measurements

Each dead sheep found was necropsied on the site and the cause of death determined if possible. In 1973, the technicians were given training by the project leader in necropsy techniques and in general followed the procedure outlined by Rowley (1970) whereby dead, newborn lambs were examined to determine whether they had breathed, walked, nursed, or digested milk. In January 1974, a short course in sheep diseases and necropsy techniques was conducted for project personnel under contract by the College of Veterinary Medicine at Colorado State University. Necropsy results for each sheep were recorded in the field on a pocket-sized necropsy card. Data were also entered on the animal's identity and location and, where possible, on its sex, age, weight, and the circumstances surrounding its death.

Any wounds on the sheep were examined closely for subcutaneous bleeding, indicating that the animal was alive when wounded; this usually was evidence of predation. The way each species of predator killed sheep was quite distinctive and, coupled with other clues such as animal sign at the scene or the geographic location, usually allowed positive identification even when more than one species of predator had fed on the carcass. In general, coyotes attacked ewes at the throat and lambs at the head or throat, or both, depending on the size of the lambs. Golden eagles (*Aquila chrysaetos*) in this study killed only smaller lambs (less than about 22-kg) with the talons entering the lamb anywhere along the back and sides from the tail to the head. It was rare for an eagle to break a bone larger than a rib, although they did dissect parts of the skeleton at the joints and could open the skull of small lambs. Black bears (*Ursus americana*) appeared less selective than coyotes and eagles. They took ewes nearly as readily as lambs and generally inflicted much greater anatomical damage than did coyotes. Bobcats (*Lynx rufus*) killed a few lambs, leaving their distinctive claw marks on the prey. Domestic dogs killed some sheep in their usual messy attacks; they were apt to bite the sheep anywhere and might only wound the victim.

While predation was usually easy to diagnose, other causes of death such as exposure, disease, or poisonous plants were not, particularly if the carcass was decayed. When temperatures were high, it was usually impossible to determine the cause of death after more than one or two days unless there was subcutaneous bleeding. If predation was not the cause of death and the diagnosis could not be made from gross evidence, the death was listed as undetermined.

With rough terrain and thick vegeta-

tion in the study areas and the possibility of predators carrying carcasses away, it was virtually impossible to account for all the lambs born on the range. Therefore, a contract was made with the Department of Animal Science, University of Wyoming, to determine the birth rate of the study herds in a lambing shed. The ewes had their lambs under the surveillance of the Extension Sheep Specialist from the University of Wyoming. Birth rates, lamb mortality, sexes and weights, and other pertinent information were recorded, and then the ewes and lambs were returned to the ranchers. Since the results of this work have now been reported in a separate publication (Faulkner and Tigner 1977), only birth and docking counts are reported here.

Results

Sheep losses were estimated from three main categories of data: the number of dead sheep found and the cause of their death as determined by field necropsy, a comparison of lamb production in the lambing sheds with lamb counts on the range, and the counts of sheep at the beginning and end of each season. Each of these indicators presented some problems, but together they completed enough of the picture to show certain patterns.

Necropsy results for the 4,440 dead sheep examined during the study are summarized in Table 1. As expected, lambs were more vulnerable than ewes, especially during their first weeks of life. Of the causes of death that could be determined, disease and predation took the greatest percentage of ewes, and predation, exposure, and starvation took the greatest percentage of lambs. Coyotes were the dominant predator throughout the study and essentially the only one in winter; golden eagles killed only spring lambs, and black bears killed sheep only in summer. After 1973, with better surveillance of the herds and improved competence in necropsy techniques, the number of sheep found and examined each year increased by about 50%, and more were assigned to definite causes of death. Even during the last two years, however, an unexpectedly large number of deaths appeared in the "undetermined" category. Most of these undetermined deaths were apparently not due to predation, except possibly when carcasses were not found promptly and golden eagles or black bears were active in the area. Eagles and bears are scavengers as well as predators (much more so than we observed with coyotes), and if a dead sheep was not found within a day or two, it was extremely difficult to determine whether they had killed it or merely fed on it after death.

Table 2 compares lamb production in the shed-lambing study with lamb counts on the range during the study. The figures for lambs born in the sheds include both stillborn and live young, so could be considered an index of the herd's reproductive potential. Birth rates in the shed were higher than the University personnel or the ranchers anticipated. The percentage of lambs returned to the rancher from the sheds was comparable with this same count on the range except that the shed count was usually conservative because ewes were sometimes returned to the ranch before all had had their lambs. These late-lambing ewes were included in the calculations for shed docking, but often their lambs were not, since the ewes were rarely identifiable after being returned to the parent herd. To provide an estimate of range losses before the lambs were counted at docking, lambs born in the sheds are compared with lambs accounted for at docking time on the range (those alive at docking plus those known dead before docking).

Table 1. Necropsy results for 3 years: percentages of dead ewes, rams,[1] and lambs assigned to each cause of death, by season.

Cause of death	Season			
	Spring	Summer	Winter	All seasons
Ewes (n = 840)				
Physical abnormality	0.4	—	—	0.1
Disease	23.2	23.1	30.8	26.3
Accident	10.0	6.6	7.5	8.1
Poisonous plant	4.3	5.2	0.9	3.1
Predation	9.6	23.1	21.8	18.1
Exposure	2.9	—	—	1.0
Other	15.7	1.0	11.2	10.1
Undetermined	33.9	41.0	27.9	33.2
Lambs (n = 3600)				
Stillborn	10.9	—	—	8.4
Physical abnormality	0.6	—	—	0.5
Disease	3.8	4.9	6.5	4.2
Accident	5.1	5.8	2.7	4.9
Poisonous plant	0.1	0.2	1.4	0.2
Predation	16.0	63.0	38.7	24.4
Starvation	17.5	2.1	0.3	13.7
Exposure	18.6	—	32.4	17.6
Other	2.2	3.2	11.4	3.2
Undetermined	25.3	20.8	6.5	22.8

[1] Only 16 rams were known to have died, so they are included with the ewes.
[2] Winter period covers 1973–74, 1974–75, and October to December 1975.

Table 2. Productivity and predocking losses in range lambing as estimated by birth rates and docking counts.

Year	Ranch	Lambs per 100 ewes					Projected % of range lambs missing (−) or surplus (+)
		In sheds		On range			
		Total born	Alive at docking	Total known born	Undocked known dead[1]	Alive at docking	
1973	A	—	—	83.6	11.7	71.9	—
	B	110.0	97.5	100.5	7.0	93.5	− 9.5
	C	154.0	140.0	115.5	2.2	113.3	−38.5
	D	97.6	83.1	92.8	8.2	84.6	− 4.8
	E	122.0	105.0	85.7	3.1	82.6	−36.3
1974	A	94.6	73.9	112.0	32.8	79.2	+17.4
	B	144.2	133.3	120.7	23.2	97.5	−23.5
	C	128.5	118.7	136.7	9.4	127.3	+ 8.2
	D	132.0	124.3	116.0	12.4	103.6	−16.0
	E	128.0	120.0	108.3	9.3	99.0	−19.7
1975	B	114.7	95.3	115.6	30.6	85.0	+ 0.9
	D	110.4	103.2	112.2	36.0	76.2	+ 1.8
	E	110.0	93.9	105.1	12.2	92.9	− 4.9
Mean for all herds and years		120.5	107.4	108.1	15.2	92.8	−10.2

[1] Includes orphaned (bummed) lambs removed from herd.

Table 3. Major causes of death and overall losses of ewes (E) and lambs (L) during the spring season.[1]

Year	Ranch	Herd size at start of season E	Herd size at start of season L	Number of sheep known dead by causes: Exposure E	Exposure L	Starvation E	Starvation L	Predation E	Predation L	Stillbirth and abnormality E	Stillbirth and abnormality L	Disease and poisonous plant E	Disease and poisonous plant L	Accident and other E	Accident and other L	Total known dead (includes undetermined) E	Total known dead (includes undetermined) L	Percentage known dead E	Percentage known dead L
1973	A	935	777				46	3	29		7		4	4	4	16	138	1.7	17.8
	B	1144	1146		1		10		11	1	17		1	2		8	96	0.7	8.4
	C	1373	1580				3		13		6		5		1		40	0	2.5
	D	1247	1153				22	1	24		8	2	4	3	10	11	119	0.9	10.3
	E	5095	4363		2		75	1	8		40		2	5	12	12	161	0.2	3.7
1974	A	797	883				58		59		2	1	5	2	52[2]	8	275	1.0	31.1
	B	1257	1483				42	4	48		15	5	7	3	4	30	283	2.4	19.1
	C	2017	2728	1			55		37		36	7	2	4	11	20	170	1.0	6.2
	D	1035	1178				18	2	5		35	3	19	4	9	24	146	2.3	12.4
	E	1110	1199						8		19	2	14	3	34	7	113	0.6	9.4
1975	B	1531	1716		171		28	10	156		49	16	21	15	15	53	491	3.5	28.6
	D	1387	1496	7	277		62	1	20		54	29	15	11	41[3]	56	501	4.0	33.5
	D-2	1066	708				23		12		17	8	4	2	12	11	84	1.0	11.9
	E	1195	1231		57		41	5	12		13	4	3	14	4	24	149	2.0	12.1
Totals		21,189	21,641	8	508		483	27	442	1	318	77	106	72	209	280	2,766	1.3	12.8

[1] For the spring season, when accurate counts of ewes could be made before lambing those figures were used; when they were not, herd size figures for ewes and lambs are the total alive at docking plus the number found dead before docking.
[2] Includes 15 orphaned (bummed) and removed from herd.
[3] Includes 9 orphaned (bummed) and removed from herd.

This extrapolation projects the percentage of lambs that were born and probably died on the range but were not found.

In southern Wyoming the weather plays an important part in sheep management. Winter weather affects the timing and success of breeding and thus the date of lambing, as well as the survival and physical condition of the pregnant ewes and their resultant productivity. Spring weather also affects survival, particularly that of newborn lambs, and spring and summer weather is important to forage production. Since the weather and other factors were different each year, Tables 3, 4, and 5 give herd counts and summarize the major causes of sheep loss for each study herd each year during the three major seasons in sheep management.

Spring Losses

Spring losses include those recorded from the time the sheep left the shearing pens to begin lambing until they were counted onto the summer range. The study began at shearing time in late April 1973, following the most severe and prolonged winter since 1949. Heavy snows started before the breeding season in mid-December and continued until the first of May. Large numbers of sheep died during the winter despite the ranchers' efforts to supplement their natural feed. The herds from Ranches A, D, and E suffered the most, and their productivity was low (Table 2). Those from Ranch B and particularly Ranch C survived the winter much better, and both their appearance and productivity indicated better physical condition. After the first of May the 1973 lambing season had generally good weather; precipitation was above average and produced good forage. Survival of the remaining ewes and lambs was good, but there were probably more deaths than are indicated in Table 3. With the bad weather and the greater number of animals monitored in 1973, one would have expected more dead lambs to have

Table 4. Major causes of death and overall losses of ewes (E) and lambs (L) during the summer season

Year	Ranch	Herd size at start of season E	Herd size at start of season L	Number of sheep known dead by causes: Starvation E	Starvation L	Predation E	Predation L	Disease and poisonous plant E	Disease and poisonous plant L	Accident and other E	Accident and other L	Total known dead (includes undetermined) E	Total known dead (includes undetermined) L	Percentage known dead E	Percentage known dead L
1973	A	2630	1210		16	11				1		60	59	2.3	4.9
	B	1021	1086	3	2	13	4	2				6	18	0.6	1.7
	C	1469	1657		1	8	1	1				3	10	0.2	0.6
	D	1091	1059		2	1	1		2	13		8	18	0.7	1.7
	E	1246	1200	1	1	12			2	4		11	22	0.9	1.8
1974	A	1742	1405		8	11	4	3		3		24	26	1.4	1.9
	B	1060	1264	2	2	12	5	2	1			9	20	0.9	1.6
	C[1]	2055	2703			17	5	1		2		8	21	0.4	0.8
	D	1031	1115	2	4	15	9	3	1	3		16	27	1.6	2.4
	E	1498	1605		2	54	3	2	2	3		9	66	0.6	4.1
1975	B	1007	1046		4	69	2	1	2	5		8	76	0.8	7.3
	D	1053	980	2		29	2	4	5	6		8	45	0.8	4.6
	D-2	1040	575		6	26	21			2		36	35	3.5	6.1
	E	1226	1135		1	16	3	5		1		6	24	0.5	2.1
Totals		19,169	18,040	10	49	294	60	24	16	42		212	467	1.1	2.6

[1] Ranch C dropped from study August 9; losses recorded only through that date.

Table 5. Major causes of death and overall losses of ewes (E) and lambs (L) during the winter season.

Year	Ranch	Herd size at start of season		Number of sheep known dead by causes										Total known dead (includes undetermined)		Percentage known dead	
				Exposure		Starvation		Predation		Disease and poisonous plant		Accident and other					
		E	L	E	L	E	L	E	L	E	L	E	L	E	L	E	L
1973–74	A		1929[1]		119			4		13	6	17		65	129		10.1[1]
	C		2203[1]					20[2]		10		13	3	47	3		2.3[1]
	D	1576	504					3	10	1	1	1	3	17	17	1.1	3.4
	E	1043	833					7[2]	12	8	3	7	4	39	19	3.7	2.3
1974–75	A		1805[1]	20		1		28	44	31[2]	5	13	5	102	85		10.4[1]
	D	1610	509					6	20	13	8	9	2	31	34	1.9	6.7
	E	586	1414						26	7[2]	5	3	12	10	45	1.7	3.2
1975 to Dec. 31	D	2030	0					7		16[2]				23		1.1	—
	D-2	820	1067					1	15	11	1	1		13	17	1.6	1.6
	E	512	1510						15			1	3	1	18	0.2	1.2
Totals		8177[3]	5837[3]	139		1		76	142	110	29	65	32	348	367	1.6	2.6

[1] Includes both ewes and ewe lambs.
[2] Includes dead rams.
[3] Does not include winter herds in which ewes and ewe lambs were counted together.

been found. One explanation was that there were too few staff members, they were inexperienced, and lambing conditions did not lend themselves to searching. For example, the ewes from Ranch E were sheared later than normal because of the long winter so they began giving birth in the shearing pens. They were then driven some 65-km to the lambing grounds, and many gave birth on the trail. Lamb survival was predictably poor under these conditions, but accurate monitoring of 5,000 ewes over a 65-km trail was virtually impossible. Had conditions been more favorable, most categories of death would probably have been substantially higher (and the number of missing sheep lower). Conceivably, predation was not as severe in 1973 because an unusually high winter kill of both domestic and wild ungulates left much carrion in the area. However, we rarely saw evidence of coyotes feeding on carrion, or even returning to feed on their own kills, except in winter.

In the winter of 1973–74, there was much less snow than in 1972–73, but the wind was strong and persistent. However, the sheep wintered well and the lambing season had favorable weather. The summer was drier than in 1973 but there was adequate forage. Productivity in most herds was excellent; those from Ranches A and C, in fact, produced more range lambs than projected from the shed-lambing counts (Table 2). Although no lambs were known to have died of exposure, 173 starved and 157 were killed by predators (Table 3). It appeared that the increased predation and the associated harassment of ewes and lambs might have led to more lambs being abandoned and thus starving,but this hypothesis could not be followed up in 1975 because bad weather obscured any such relationship that might have existed. In spring 1974 there was an unusually large number of undetermined deaths. Nearly half of these occurred on Ranch B, where the ewes lambed unherded in a 2,000 ha pasture. An early June snowstorm was suspected of killing many of them, but it was not possible to thoroughly search more than a third of the area each day, and since sheep carcasses decayed very rapidly in warm weather and golden eagles had fed on many of them, the cause of death often could not be determined.

In the winter of 1974–75 there was more snow but less wind than in 1973–74, and the sheep survived in good condition. It appeared that the spring of 1975 would produce a bumper crop of lambs, but two severe snow storms a week apart during the peak of lambing caused heavy losses. This is reflected in the low survival at docking (Table 2) and the large number of exposure deaths recorded (Table 3). Ranches B and D were the most severely affected by the bad weather. Ranch B also suffered considerable predation: golden eagles took 61 lambs, and coyotes took 95 lambs and ten ewes. Even though fewer animals were monitored in1975 because Ranch A went out of business, the number of dead animals found increased. This was probably due to better surveillance and to the increase in deaths from predation and exposure.

Thus, it was apparent early in the study that sheep, particularly newborn lambs, died from a variety of causes. Even with greatly different weather conditions each winter and spring of the study, losses during the lambing season always exceeded those for the other seasons combined.

Summer Losses

Summer losses include those from the time the sheep were counted onto the National Forest grazing allotments in June until lambs were separated from the ewes for shipping in early October. Deep snows and unseasonable weather sometimes changed these dates, and in 1975 severe predation coupled with poor herding caused the rancher to remove Herd D-2 before the summer allotment expired.

Losses were much lower in the summer than the spring, but the percentage killed by predators was substantially higher. During the three years of the study, predators were responsible for 50.5% of all known deaths on the summer range, versus only 15.4% on the spring lambing range. With the change in season and grazing area, there also was a change in species of predators. Golden eagle predation stopped in the summer and black bear predation began. As usual, the coyote was the dominant predator, but bear kills outnumbered coyote kills 34 to 31 in summer 1973. Most of these bear kills occurred on Ranch A, where sheep were unherded in a fenced 1,800 ha pasture that included a deep, rough canyon. The large number of undetermined deaths for this herd (91, versus 22 for all other herds that summer) also includes many cases of suspected bear

predation, where either the carcass was badly decomposed when found in the thick vegetation or the bear had eaten so much of it that the cause of death could not be determined. On one afternoon two technicians saw three black bears of different sizes and colors on this allotment.

In 1974 the number of sheep found dead on the summer range (Table 4) was a little greater than in 1973 and confirmed predator losses were higher, particularly coyote kills on Ranch E. The smaller number of undetermined deaths reflects better surveillance and improved competence in diagnosis.

Still more dead sheep were found in 1975 (Table 4). Most of the increase was due to predator kills, many found the month before shipping. Of 55 mortalities from Herd B during the month, 51 lambs and one ewe were killed by coyotes. The dead lambs were estimated to weigh about 32-kg each. Ranchers particularly resent predator kills at this time because they have spent most of the cost of producing the lamb and have not yet seen any return on their investment.

The D-2 Herd, while suffering substantial predator losses, also had deaths from selenium poisoning (listed under "disease" in Tables 1 and 4). When this element is present in the soil, certain plants translocate it and can cause death when eaten (Siegmund 1973). However, as no work was done on this allotment in 1973 or 1974, it is not known whether losses from selenium poisoning were different in 1975 from other years.

Winter Losses

Winter losses included those from the time the winter herds were formed at shipping in October until the spring counts at shearing in April or May. Losses recorded during the winter season are not directly comparable with those during other seasons because of missing time periods or herds, and some earlier herd counts did not distinguish replacement lambs from adult ewes.

The largest number of winter deaths occurred on Ranch A in 1973–74 (Table 5). According to the herder, an uncastrated lamb bred a number of ewes in early fall 1973; they began to lamb in late January 1974, and most of the lambs died of exposure. In addition, the Ranch A herd contained a large number of old ewes, and many died from disease and exposure in both 1973–74 and 1974–75.

Coyotes were responsible for the most losses in the winter of 1974–75 when they killed 124 of the 307 dead animals examined. Disease and exposure accounted for most of the remaining mortalities. During the three winters, coyotes were responsible for 30.5% of all known deaths; disease and exposure for 35%.

Missing Sheep

A perplexing source of loss that is often blamed on predators is missing sheep. Other investigators have also experienced this problem (Davenport et al. 1973; Nass 1975). In 1973 we tried attaching mortality-sensing transmitters (Kolz 1975) to about 400 lambs in an attempt to trace missing ones. However, rigid collar attachments could not be used on growing lambs and would probably have interfered with predation. The attachment method chosen in feedlot trials, cementing the 15-cm transmitter to the wool behind the withers, proved unsatisfactory, and much time was wasted in tracing unattached transmitters. Therefore, we abandoned attempts at radio telemetry and relied mainly on herd counts to indicate the number of missing animals. If sheep were missing from the National Forest grazing allotments at the end of summer, aerial searches of the allotments and drive trails were made. Generally these were not very productive, since the deciduous trees had not yet lost their leaves, but about 100 head from Ranch A were found by aerial search in September 1974.

Numbers of sheep missing during the lambing season were difficult to determine. The projected predocking losses of lambs (Table 2) suggested unusually large numbers missing in herds C and E in 1973 and in herd B in 1974. However, since these extrapolations showed *surplus* lambs in four cases, they should be interpreted cautiously. It was even difficult to account for all ewes on the lambing range. For example, on Ranch B, ewes and lambs from adjacent pastures were often found in the pasture with the study herd, and sometimes accurate counts were not made of the late-lambing and dry ewes removed from the herds. Although unaccountably missing sheep may not be a severe problem in the spring, there were so many uneaten or only partially eaten predator-killed lambs that we suspected that other carcasses may have been carried off by predators.

This situation changed in summer (Table 6). Four examples of high numbers of missing sheep are apparent: Ranch A in 1973 and Ranches A, B, and E in 1974. The Ranch A herd was managed far less intensively than the others and showed disproportionately high losses to most causes. Even so, it is difficult to accept that 346 and 501 sheep were left either dead or alive on the forest allotment at the end of the two summer seasons. The intensive searches after the sheep left the area would have located many of these animals had they been there. The manner of their disappearance is still a matter for conjecture.

Table 6. Number of sheep missing after the summer grazing season.

Year	Ranch	Base herd size	Number missing	Percent missing
1973	A	3840	346	9.0
	B	2107	17	0.8
	C	3126	0	0
	D	2150	9	0.4
	E	2446	59	2.4
1974	A	3147	501	15.9
	B	2324	99[1]	4.3
	C	4758	—[2]	—
	D	2146	25	1.2
	E	3103	85	2.7
1975	B	2053	—[3]	—
	D	2033	24	1.2
	D-2	1615	49	3.0
	E	2361	21	0.9
Total		13,669	1,235	4.1

[1] Ranch employee saw sheep mix with another herd but could not get a count.
[2] Ranch C was dropped from study on August 9, so missing sheep unknown.
[3] The herder left one-fourth to one-half of the sheep on the summer range, so number missing is unknown.

Some of the 99 sheep missing in the summer of 1974 from Ranch B were not lost but traveled off the summer range with other bands of sheep. This was reported by one of the ranch employees, but he made no accurate count of the Herd B sheep he saw in other herds. The importance of a competent herder was again illustrated in Herd B in 1975, when 25 to 50% of the sheep that were counted onto the summer range did not return to the shipping area. However, most of these sheep were probably recovered from the other herds because the rancher was aware of the situation. High losses in the summer of 1975 in Herd D-2 also reflected a labor problem. The herder

often allowed the sheep to scatter widely through the forest during mid-day, making it difficult to regroup them in the evening. Many of the 32 predator losses occurred during the day, probably because of the "loose" herding.

The 85 sheep missing in 1974 from Herd E might be largely attributable to predation. Of the three summers, this herd was preyed on most severely in 1974, and about 75% of the dead animals found were killed by predators, mostly coyotes. Part of the allotment is covered with thickets of Gambel oak, where dead sheep could easily have been missed by the searchers.

Sheep were sometimes missing during the winter season as well. On Ranch D, 32 sheep were missing in winter 1973–74 and 21 in 1974–75. On Ranch E, 19 were missing in 1973–74 and 12 in 1974–75. During the last two and one-half months of 1975, 49 replacement ewes but no adult ewes, were missing from Herd D-2, a puzzling situation because more searching was done on this herd than any other. In addition to horseback searches, 3 hours were spent in an extensive aerial search in and around the areas where the herd had grazed, but the sheep were not found dead or alive. Ranch A showed abnormally high numbers of sheep missing when it was liquidated after the winter of 1974–75, but the counts were incomplete and the number missing could not be accurately determined.

Discussion

A topic of primary interest in this study was the extent of sheep losses to predators. Of the causes of death determined by necropsy, predation was the second most important for ewes and most important for lambs (Table 1). Predators killed 18.1% of the dead ewes examined and 24.4% of the lambs, or 23.2% of the sheep overall. Percentages of the ranchers' herds lost to known predator kills are summarized in Table 7. These figures are based on mean herd counts and mean seasonal losses for all ranchers, so they suggest trends rather than illustrate individual loss situations. In addition they are probably low for 1973, when surveillance was inadequate because of bad weather and too few personnel, and possibly low for 1975, when the study stopped on December 31 rather than continuing through April. These calculations indicate that the ranchers in the study lost 0.2% of their ewes and 1.5 to 3.2% of their lambs to predators, or 1.2% of their sheep overall.

Table 7. Known rates of predation on study herds.

Season and year		Mean herd size		Percent known killed by predators					
				Ewes			Lambs		
		Ewes	Lambs	Low	High	Mean	Low	High	Mean
Spring	1973	1958	1803	0	0.3	0.1	0.2	3.7	1.6
	1974	1243	1494	0	0.3	0.1	0.4	6.7	2.5
	1975	1371	1481	0.1	0.6	0.4	1.0	9.1	3.8
Summer	1973	1491	1242	0	0.5	0.3	1.0	1.7	1.3
	1974	1477	1618	0	0.5	0.2	0.6	3.4	1.4
	1975	1081	934	0	0.6	0.3	1.4	6.6	3.9
Winter	1973–74	1309	668	0.2	0.7	0.5	1.4	2.0	1.7
	1974–75	1098	961	0	0.4	0.2	1.8	3.9	2.9
	1975	1120	1288	0	0.3	0.1	1.0	1.4	1.2
Means for all seasons	1973					0.2			1.5
	1974					0.2			2.1
	1975					0.2			3.2

Weather-related deaths, if they could be lumped into that broad grouping, would probably have been higher than predation losses. Exposure, however, which caused 14.5% of all deaths, is the only category easily attributable to bad weather. We know that some of the deaths attributed to starvation, accidents, and disease were induced by inclement weather, but it is impossible to determine how many.

Although eagles killed lambs in the spring, bears killed ewes and lambs in the summer, and bobcats and dogs killed a few sheep, the coyote was the major predator. Coyotes were responsible for 77% of all known predator kills during the study and for 18% of all recorded deaths. Whether predator losses have increased since the ban of toxicants on public lands went into effect in 1972 cannot, of course, be answered by this study. Nevertheless, the general trend was an increase in the rate of predation from 1973 through 1975 (Table 7). Considerable money and effort was expended by the cooperating ranches in predator control, but predation continued.

There were predator kills in every herd throughout the study. Generally, ewes were not killed if lambs were present. We monitored only one herd (D, winter 1975) in which there were no lambs; coyotes killed 0.3% of these ewes in 2 months. The greatest loss of lambs to predators was in Herd B in 1975 (Table 3). Although the lambs killed by predators composed 9.1% of the lambing herd and 6.6% of the summer herd (Table 7), the average loss of lambs for all herds in 1975 was 3.2%.

The percentages of sheep lost to predators in this study (Tables 1 and 7) do not differ much from those reported by other workers, even though the data were collected differently. In Utah, Davenport et al. (1973) found that verified predator kills accounted for 1.8 to 40.3% of all recorded losses and took 1.5% of the 17,453 lambs studied. Nielson and Curle (1970) in a Utah questionnaire study found that about 6% of all sheep were lost to predators and that coyotes accounted for 78% of all predator losses. Nesse (1974) in a California survey, found an annual predation rate of 1.1% for ewes and 2.7% for lambs. Nass (1975) studied predator losses in Idaho and found a predation rate between 1.1% and 1.7% for lambs, and 0.7% and 1.4% for ewes. Predator control was in effect during all of these studies.

Although there are no figures to quantify the loss, we believe that predators were responsible for indirect damage to the herds as well as outright killing. Scattering of a herd by predators, particularly a drop bunch during lambing, probably caused some ewes and their lambs to become separated so that lambs died from starvation, trampling, or exposure without their death being attributed to predation.

A part of the controversy over predation on sheep has been whether predators take "the weak and the sick" or prey on the "fattest, heaviest lambs." While wild populations of ungulates may react to predators by losing the weak and sick first, domestic sheep are so defenseless that it makes little difference whether lambs are healthy or not—coyotes and bears can kill lambs with ease. In fact, it is possible that the healthier, more active lambs attract the

attention of predators. We had hoped to throw some light on this controversy by recording the weight of dead lambs at necropsy. Unfortunately, the weights proved of little value because predators or scavengers had often removed parts of the carcass. Furthermore, for a lamb's weight to indicate its health, its age would have to be known; but age was an estimate and often had to be based on weight. However, it was possible to obtain the sex of many of the dead lambs; where known, the sex ratio was approximately equal.

In southern Wyoming, where there may be 4,000 to 6,000 or more stock sheep on a ranch, it is common for one or two herders to care for 1,000 to 2,000 sheep. Additional help was needed during the lambing season, but rarely in our area were more than two herders assigned to a lambing herd. They usually received no supervision beyond brief visits by a "camp tender" once or twice a week. Although there are still a few good middle-aged herders and a few "old-timers" in their sixties, most of the herders hired were young and inexperienced. The combination of inexperience and poor supervision of the herders resulted in mixing of herds, accidents, missing sheep, death and abandonment on the lambing grounds, scattering of the herds, theft of lambs, and numerous other problems, including predation. For example, Ranch A and Herd D-2, with poor herders, and Ranch B, with no herders during lambing, showed excessive predator losses. From our observations, even the most competent of herders cannot stop all losses, from predation or any other cause, but good herding can definitely reduce them. Yet, close herding can also cause problems, particularly in the utilization of the range, and the presence of inexperienced or incompetent herders on the lambing grounds can be as damaging as it is helpful. Nevertheless, good management of the ewes and lambs on the lambing ground can improve lamb yields, as indicated by the docking percentages in Table 2. For example, Ranch C had fewer stock sheep than the other ranches and was managed more intensely. Every morning during the lambing season the owner actively participated in moving the main herd away from the ewes that had lambed, and the docking percentages reflected this care. Management intensity, however, decreased as the number of sheep under one ownership increased. The result was reliance on less competent employees and lower survival of lambs.

Certain problems associated with range herds are largely unavoidable under the management systems used in southern Wyoming. Lambing sheds would reduce losses from weather and perhaps from predators, but apparently the lack of suitable pre- and post-lambing pasture and the labor problem precluded shed lambing. Stillbirths and disease deaths probably cannot be altogether eliminated but could have been reduced in some cases by zealous culling of the older or unthrifty animals. The accident rate could have been lowered by better management, implying again problems of labor, and losses following shearing could have been lessened if shearing crews were better trained and more careful. Some ewes died from shearing injuries, some aborted because of rough handling, and some probably could not nurse their lambs because of injuries to the udder or teats.

These examples serve to demonstrate that while predation was a significant problem it was not the only one. Predation is dramatic and arouses emotions, but its magnitude is often tied to other circumstances. However, ranchers feel that predation, unlike weather or economic conditions, is a problem that could be alleviated immediately if efficient and safe techniques for the control of predators were made available to the livestock industry.

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Michael Milstein

Sheepherder Trisha Tidemann at her Ten Sleep, Wyoming, camp

How Sy keeps the coyotes away

TEN SLEEP, Wyo. — Two summers ago, Trisha Tidemann, a Worland, Wyo., sheepherder, led some 1,400 sheep up into the higher reaches of Wyoming's Bighorn Mountains. In the dense forest there it was hard to keep watch over all the sheep, and predators — coyotes, but maybe black bears and mountain lions, too — killed close to 60.

Last summer Tidemann took about 900 sheep to graze in the same place. She did not lose any. The difference was Sy, a giant, dirty-white Great Pyrenees dog. Standing as tall as a man's waist, he's one example of effective, non-lethal tools being used more and more by sheepherders around the West.

Watchful herding practices are considered among the most important ways of protecting sheep from native predators. With sheep ranchers facing a lack of qualified herders who will accept the trade's low pay and rugged conditions, many Western flocks are left unended. Some ranchers, though, are turning to other methods of livestock protection, from guard dogs to electric fencing. If used properly, these can reduce the need for government-funded predator control and poisons on public lands.

Usually raised with a sheep flock, guard dogs tend to adopt their charges and stay alert for threats, especially at night when predators are active. "Every night he goes out and checks things out," Tidemann says. "You'll hear the coyotes howling, then you can hear Sy barking, and pretty soon those coyotes disappear."

"They've really done some good for us," says Brigham City, Utah, sheep rancher Malcolm Young, who uses two Great Pyrenees. He grazes sheep in the Wasatch-Cache National Forest's Mt. Naomi Wilderness Area, where a three-year trial program will allow government aerial coyote gunning only if predator-caused losses exceed a certain threshold where guard dogs are used. So far, there have been no coyote killings.

— M.M.

—Llama—

Continued from page one

doing what comes naturally, according to Darlene Vaughan of Wind River Llamas in Lander. "That's just their normal behavior. They're a curious animal, and therefore when something comes into their area that's different, they'll go toward it fast."

Llamas are also naturally wary of canids such as coyotes, foxes and dogs, according to a 1993 Iowa State University study on guard llamas. Also, after they become familiar with an area and grow attached to the sheep, they become "active leaders and protectors of their flock," the study states.

"They're a lonely animal, so they'll bond with the sheep," Eileen said. "They eat anything a sheep eats, so they're very easy keepers."

In fact, Mumford displayed some jealousy when the Urbigkeits recently brought another llama home to the ranch. The new llama, 7-month-old Ashley, will be a pet and not a guard.

Mumford's reaction to the newcomer was justified since, after all, he probably doesn't know what a llama is, Eileen noted. He hasn't seen one since he was weaned.

The two llamas won't spend too much time together, however, because Mumford might bond with Ashley and no longer be effective as a sheep guard, she said.

In addition to being a good guard, Mumford was for a time something of a celebrity. His original owners, John and Betty Lye of Riverton, were some of the first ranchers to try using llamas as guard animals.

The Lyes, who ranched near Pavillion, initially tried using several llamas in their pasture. Then they bought 4-month-old Mumford from a Nebraska rancher in 1980, they said.

Mumford was named by the rancher's children after The Amazing Mumford, the magician character on "Sesame Street" whose catch phrase is "A la peanut butter sandwiches."

Eventually, the Lyes' experiment attracted interest from researchers and media across the country. Mumford appeared in numerous articles, including one in the children's magazine "National Geographic World."

The magazine noted in October 1982 that "researchers at the University of Wyoming are following Mumford's career as a guard animal." The university also obtained llamas of its own to use in experiments with sheep, Betty said.

During the media blitz, John often joked that he wanted to answer the phone when the television show "That's Incredible" called. Then he really did get a call from them.

Mumford, alert and at the ready, watched out for one of his charges. He's been living with sheep ever since he was a newborn.

The person at the other end of the line wanted to come out and film Mumford in action chasing down coyotes, but when John explained that you don't often see coyotes — you just see the damage they leave — the show lost interest, he said.

The Lyes and their llama even showed up in an English textbook pronoun exercise — the result, they think, of a release form they signed when Mumford was profiled in "National Geographic World." The textbook was published by Houghton Mifflin in 1988.

Apart from his celebrity status, Mumford proved to be an effective guard for the Lyes. The year before they got him, they lost 42 sheep to predators. The year after, eight of their sheep were killed, John said.

The Lyes had, according to Eileen Urbigkeit, "offers coming out of their ears" for Mumford when they decided to sell him and get out of the ranching business. He was purchased by the Urbigkeits in March of 1985, after the Lyes decided that Mumford was "a sheep and he belongs with sheep," John said.

Mumford needs to have sheep around him, or else he's "a nervous wreck," John added. Right now most of the Urbigkeits' sheep are at their son's ranch for lambing, but they left a few ewes in their corral to keep Mumford company, Eileen said.

Even though the Urbigkeits own the country's most famous llama, Mumford isn't the only one out there. Vaughan estimated that about 10 Fremont County families own llamas, either as guards or pets.

A llama intended as a guard may cost anywhere between $300 and $1,000, Vaughan said, depending on their appearance. "Some llamas are better looking, just like horses or anything else," she said.

Llamas are good pack animals as well, Vaughan said, and because of their gentle nature they are popular as show animals for children.

"They're a forgiving animal," she said. "You can be a little inept at doing the work, and they'll forgive you for it."

It doesn't seem to matter much whether a guard llama is introduced to sheep right after weaning or at a later age. The Iowa State University study found that the age of llamas after they're a year old did not relate to their effectiveness.

The experiences of a rural Riverton family to whom Vaughan recently sold a guard llama seem to bear this out. The 9-year-old llama is doing well, she said.

"We sold her at a time of year when the sheep were lambing, so she got used to being with the sheep and only the sheep," she said.

However, there are a few things ranchers should keep in mind about guard llamas. For example, male llamas kept with sheep have to be gelded, Vaughan said, because they breed year-round instead of in seasons like other range animals. "Any day is breeding day for a llama," she said.

The Lyes learned that lesson the hard way when they owned Mumford. He wouldn't leave the ewes alone and drove off any ram who wanted to get near them, John said.

Llamas also tend to work best in smaller pastures, Vaughan said. In large, expansive plots of land, they can't see what's coming as well as they can in smaller fields, she said.

Llamas also have a few bad habits, like spitting. Mumford spits when he sees something he doesn't like or when the Urbigkeits' dogs are bothering him, Eileen said.

"When he puts back his ears and starts chewing, watch out!" Eileen said. "It's awful. It stinks and it's sticky and it's terrible."

She also recalls another time when Mumford made himself a nuisance. A mountain lion had been spotted, and Ralph decided to corral the llama to keep him out of trouble.

But to get to the corral, Mumford had to cross a ditch full of water, and he didn't like that idea at all. Ralph and his sister had to pull Mumford "inch-by-inch" across the ditch.

"She'd pull, he'd push," Eileen said. "Mumford would dig his feet in and spit and holler."

Overall, though, the Urbigkeits think that Mumford is really good to have around.

"You just fall in love with them," Eileen said. "It gets addictive."

Llamas are a little like cats, she added. "You don't own them. They own you. It's on their terms."

Eileen Urbigkeit offered a treat to Mumford, who's been guarding the Urbigkeits' sheep for nine years. His career as a guard llama began on a Pavillion-area sheep ranch owned by John and Betty Lye, now of Riverton

County's most famous llama still a good guard

❑ South American animals effective in protecting sheep against predators, owners say.

By Felicia Jordan
Ranger Staff Writer

At the Urbigkeit Ranch in Crowhean, sheep may safely graze.

Yes, coyotes do lurk around the Urbigkeit place. They just don't bother the sheep much.

Look out at the fields and you might see the reason why. He could be out there now, bunching the flock into a tight group and placing himself between a coyote and the sheep. And if that coyote tries anything funny, you might just see him charge, full speed, running about as fast as a horse, while the coyote flees from the outraged onslaught of the Urbigkeits'...

Guard llama?

Yes. He's Mumford, and he's been guarding Ralph and Eileen Urbigkeit's sheep for nine years.

"He's been delightful," Eileen said. "I just enjoy every minute with him."

When Mumford comes toward them, "coyotes get out just as fast as they can go," she said. "The coyote would rather face Ralph on a motorcycle with a rifle in his hand than the llama.

"He'll be right behind that coyote until he gets out of the field. We haven't lost a lamb or a ewe to a coyote on our place since we got him," Eileen said.

She has heard that if a llama ever catches a coyote, he'll stomp on it. But Mumford has never had to go to such lengths to drive an intruder off the place.

When guard llamas like Mumford chase coyotes away from the flock, they're just

Please see 'Llama,' page 13

Jenna, range warrior

Donkey keeps dogs, coyotes at bay

By TOM MAST
Star Tribune staff writer

JAY EM — Long-time rancher Mark Harris admits he had doubts that a young female donkey named Jenna would be much good combating predators.

Harris, 72, has been associated with the livestock business all his life. He has raised cattle, sheep and now, cashmere goats. He also has sold horses for 50 years.

But when the family learned that donkeys might be effective at running off predators, Harris concedes he was "pretty skeptical."

Still, they decided to give it a try. So Jenna was acquired and placed with the cashmere goats.

At first, it appeared the donkey might be afraid of the goats. "Then she got to going with them, and I really didn't think she was doing a whole lot," he said.

Harris even considered getting rid of Jenna, but his wife, Betty, insisted that the donkey watched vigilantly over the goats.

"And she does," Harris allowed.

Wherever the goats go, the donkey is sure the follow. She has even been known to round up strays. If the sheep were out as much as the goats, she'd stick with them, too, Sarah Harris said.

'Mean,' & no training required

Jenna, as it happens, is a herder with a pronounced mean streak, especially when it comes to canids. She's not overly fond of deer, either.

She will wheel about on the border collie stock dogs and bray menacingly. When a group of deer appeared at the feed grounds last winter, she ran them back into the hills.

"They're (donkeys) kind of mean," Sarah said. "She'll go at the dogs with her teeth bared, just like she's going to really get them. And I wouldn't be surprised if she would, if she could catch them."

Jenna required no training and needs no special consideration. She was simply placed with the goats for two or three weeks, then turned out with them.

Before Jenna's time, the Harris family lost several young goats to predators. Coyotes would come right down to the corral at night, Sarah said.

Sometimes after dark, she said, coyotes still can be heard outside. Followed by the braying of a donkey. Followed by silence.

In the year and a half since Jenna arrived, predator losses among the sheep and goats have been eliminated. There are still coyotes about, Sarah said. They just don't seem inclined to tangle with the three-year-old donkey.

Little success with dogs & llamas

In the past, the family tried guard dogs and llamas to protect their stock. Neither worked as well as the donkey.

The llamas would jump the fences, and beat up on the horses and cattle, while "the guard dogs tend to wander," Sarah said. "They'd roam a lot. They'd end up in Jay Em and people would feed them. You couldn't keep them home."

The Harris family keeps about 400 goats and 50 Rambouillet sheep. In the past, they ran thousands of sheep. And Mark Harris thinks donkeys could be just as effective with large bands as they are with smaller flocks.

"It's like anything, like llamas, dogs. With anything, there's good ones and ones who won't, I suppose," he said. "But I have a feeling that they'd do quite a little protecting."

With large bands, where coyotes might come from several directions, more than one burro might be required, he said, but "I think they'd do their share."

Jenna, it appears, is not unique. Similar donkey behavior has been reported elsewhere.

According to a recent Associated Press account, for example, a donkey named Pop Tart near Salem, Ore., has eliminated predator losses in a flock of 500 sheep for at least the past three years in a neighborhood reputedly infested with coyotes.

"The sheep gather around her in the field, and she chases dogs and coyotes out of the field," said the donkey's owner, David Elam.

Male donkeys don't work out as guards, the Harrises say. Neither, apparently, do female donkeys with young.

But Jenna has been effective beyond expectations. "We sure have had good luck," Mark Harris said. "We haven't had predator loss."

If there is any truth to this article, I see no reason the 1080 should not be released to control losses in livestock, game birds, and animals.

Raymond Record

Raymond Record
Box 302
Gillette, WY 82717

1080 was developed during WWII...

In the Feb. 16 *Agri-News* there's an article about "Collars would kill coyotes that kill sheep." It stated environmentalists and others worry the "poison" in the collars could kill other animals.

First, let me tell them that 1080 is not a poison. 1080 was developed during WWII to kill off the German guard dogs. It is specifically designed to kill a canine species and will not kill an eagle, magpie, etc. Furthermore, there has never been a human death caused by 1080.

One of the most experienced men I've known handling 1080 was Clayton Zook from Miles City, Mont. He was the supervisor of ADC for eastern Montana. I worked with him several years.

When Canada started the use of 1080 to reduce the predator problems, Mr. Zook went to Canada to help them. They used some elk that were overpopulating Waterton Park. The carcasses were treated with 1080 and loaded onto a rail car to be shipped. The car was parked near a reservation during the weekend. Monday the treated meat was all gone. The Canadian officials were near panic. Mr. Zook assured them that a human would have to consume 17 pounds of that meat to harm them. After interview and investigating the natives, they found one old man with the quick step. No harm done. so you see, 1080 is one of the safest tools we have to control the predator.

It is not in a true sense a poison. It is a blood thinner made from the mold from clover. The canine has blood vessels on the surface of their stomach and 1080 causes internal bleeding. It is a painless death and 1080 will not kill anything that does not have these characteristics.

I have watched eagles feed on a 1080 bait for one hour and fly off. It is very unlikely to kill the second scavenger. It is one of the safest tools we have ever had and much more 1080 is used in our cities to kill off rats than was ever used in the West to control predators.

Instead of the environmentalists bucking its use, they could help a lot more by encouraging its use. We might then see some birds. The sagehen is gone and what a crime.

We should have 1080 at the county level. Controlled and used properly and safely, we could all benefit by it. It is not against the law to use 1080 on private property. The feds just made it against the law to transport it across a state line. The biggest plant where 1080 is manufactured is Hot Springs, Ark.

Jim Murnion
Shawmut, Mont.

FRESH AMERICAN Lamb

MONTANA WOOL GROWERS ASSOCIATION

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Congresswoman Barbara Cubin
U.S. House of Representatives
Casper, Wyoming Office, VIA FAX

April 8,1996

Dear Congresswoman Cubin,

The Montana Wool Growers Association has a membership of 2,300 sheep producers in Montana. We wish to compliment you on your hearing regarding Animal Damage Control under USDA/APHIS. We would also like to have our comments entered into the hearing as the problem of animal damage control is severe in Montana.

Sheep numbers continue to decline in our state and the reason is numerous including the recent loss of the Wool Act which provided incentive payments to growers. However, the number one reason producers list for going out of sheep raising is predator losses. Data from the Montana Statistical Reporting Service would bear out their complaints of higher than normal losses, and those losses would be even higher if it were not for the efforts of animal damage control agents of USDA. That data for last year shows that predators killed an estimated two million dollars worth of sheep in 1995 and 1.9 million in 1994. Coyotes are the predator responsible for most of the losses amounting to 1.5 million dollars in 1995. I have included a complete report of the MONTANA SHEEP AND LAMB LOSSES- 1995 for your review.

We want to be part of the record as favoring continued funding for animal damage control programs and in fact trying to find more dollars for in the field predator control work. Our Montana producers are spending their own dollars on predator control both lethal and non lethal. Every county has a per capita fee for predator control plus a statewide tax for predator control. Each grower spends dollars on guarding animals, snares, traps, shooting and fencing in order to reduce their loss.

Sincerely,

Robert N. Gilbert
Secretary-Treasurer

cc Bryce Reece, Wyoming Wool Growers Assn.

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MONTANA SHEEP & LAMB LOSSES--1995

Released: FEBRUARY 1996

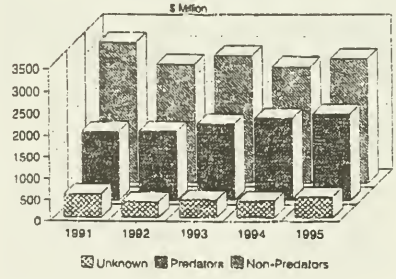
Montana sheep & lamb producers lost 92,000 animals to weather, predators, disease and other causes during 1995, representing a total value of $5.3 million, according to a survey conducted by the Montana Agricultural Statistics Service. The total number of sheep and lambs lost was down 12 percent from 1994 but the total value of inventory lost in 1995 rose 8 percent. Higher market prices this past year resulted in an increased value of sheep and lambs. The decline in sheep and lamb losses is partly due to the drop in total inventory which is down 8 percent from the previous year. Sheep and lamb deaths amounted to 9.9 percent of the January 1 inventory and lambs born, slightly lower than the previous year.

Predators caused an estimated $2.0 million in losses in 1995 up from $1.9 million the previous year. Losses due to predators amounted to 4.0 percent of the January 1 inventory and lambs born and 40 percent of all sheep and lamb deaths. Coyotes remained the largest predator and the largest cause of all deaths. The value of losses attributed to coyotes was $1.5 million. The number of sheep and lambs lost to all predators totaled 37,100 head, down 5,800 head from last year. Coyotes accounted for 30 percent of all death losses in the state and 75 percent of all predator losses. Lamb losses by all predators amounted to 31,400 head, down 14 percent from last year. Most of the decrease in lamb losses was due to a fall in fox and eagle losses. Lambs lost to eagles dropped 2,700 head while fox losses declined 2,500 head. The number of sheep lost to all predators totaled 5,700, down 14 percent. The largest cause of sheep losses was coyotes at 4,400 head.

The total value of non-predatory losses was $2.8 million in 1995 up from $2.6 million the previous year. n-predatory losses accounted for 51 percent of all losses. There were 30,900 head of lambs lost to weather, disease and other non-predatory causes in 1995, down 12 percent from the previous year. The largest causes of lambs losses were weather conditions at 12,700 head. Adverse weather conditions resulted in a number of producers losing more newborn lambs than the previous year. Sheep losses to non-predatory factors totaled 16,000, 15 percent lower than 1994. Sheep lost to old age continued to be the largest non-predatory cause at 5,700 head, down 800 head from the previous year.

The value of sheep and lambs lost to unknown causes jumped 29 percent from last year to $.5 million. Lambs lost to unknown causes were up 1,000 head to 4,700. Unknown causes claimed 3,300 sheep, 300 head fewer than last year.

Sheep & Lamb Losses-1995
Causes of Death



SHEEP & LAMBS: Percent of Losses By Cause and Size of Flock, Montana, 1994-1995

CAUSE OF LOSS	SIZE OF FLOCK										
	1-99		100-999		1000+		All Sizes				
lators	1994	1995	1994	1995	1994	1995	1991	1992	1993	1994	1995
Fox	1	–	5	3	9	6	4	4	3	6	4
Dog	3	6	1	2	–	–	2	2	2	1	2
Coyote	19	17	32	31	29	28	25	28	28	27	30
Eagle	1	1	2	3	9	4	1	2	2	5	3
Bobcat	–	–	–	–	–	–	–	–	–	–	–
Bear	1	1	–	–	1	–	–	1	1	1	–
Mountain Lion	–	1	1	1	1	–	–	1	1	1	1
Other Animals	–	1	–	–	–	–	–	–	–	–	–
Unknown Predators	2/	1	2/	1	2/	–	2/	2/	2/	2/	1
Total Predators 1/	25	27	42	41	49	40	33	37	37	41	40
Non-Predators											
All Diseases	19	12	16	13	13	9	11	11	11	15	10
Weather Conditions	10	20	14	14	10	18	16	11	11	11	16
Poison	–	1	1	1	2	3	2	2	2	2	2
Lambing Complications	19	15	11	10	8	7	15	15	15	10	9
On Back	1	1	1	1	1	1	2	2	3	2	1
Age	9	5	5	6	3	4	3	6	7	6	6
Theft	–	–	1	1	5	4	3	3	3	3	2
Other	9	10	2	4	1	4	4	8	3	2	4
Total Non-Predators	67	62	52	50	44	49	57	56	55	52	50
Unknown Causes	8	12	6	8	7	11	8	7	8	7	10
Total Loss 1/	100	100	100	100	100	100	100	100	100	100	100

1/ Totals may not add due to rounding. 2/ Not available. – Denotes less than 1 percent.

Peggy Stringer
State Statistician

Carmen Rost
Agricultural Statistician

SHEEP & LAMBS: Losses by Cause, Montana, 1994-1995

Cause of Loss	SHEEP LOSS				LAMB LOSS				TOTAL LOSS			
	Number of Head		Value in Dollars (000) 1/, 3/		Number of Head		Value in Dollars (000) 2/, 3/		Number of Head		Value in Dollars (000) 3/	
	1994	1995	1994	1995	1994	1995	1994	1995	1994	1995	1994	1995
Predators												
Fox	100	–	6.6	–	5,900	3,400	237.5	166.1	6,000	3,400	244.1	166.1
Dog	500	700	33.0	57.4	500	900	20.1	44.0	1,000	1,600	53.1	101.4
Coyote	5,000	4,400	330.0	360.8	23,500	23,600	946.1	1,152.6	28,500	28,000	1,276.1	1,513.4
Eagle	100	200	6.6	16.4	5,200	2,500	209.4	122.1	5,300	2,700	216.0	138.5
Bobcat	200	–	13.2	–	100	–	4.0	–	300	–	17.2	–
Bear	200	100	13.2	8.2	400	200	16.1	9.8	600	300	29.3	18.0
Mountain Lion	400	200	26.4	16.4	600	300	24.2	14.7	1,000	500	50.6	31.1
Other Animals	100	–	6.6	–	100	–	4.0	–	200	–	10.6	–
Unknown Predators	4/	100	4/	8.2	4/	500	4/	24.4	4/	600	4/	32.6
Total Predators	6,600	5,700	435.6	467.4	36,300	31,400	1,461.4	1,533.6	42,900	37,100	1,897.0	2,001.0
Non-Predators												
All Diseases	4,500	2,800	297.0	229.6	11,200	7,200	450.9	351.6	15,700	10,000	747.9	581.2
Weather Conditions	1,900	1,600	125.4	131.2	9,900	12,700	398.6	620.3	11,800	14,300	524.0	751.5
Poison	1,400	1,500	92.4	123.0	800	400	32.2	19.5	2,200	1,900	124.6	142.5
Lambing Complications	1,400	1,300	92.4	106.6	9,300	7,100	374.4	346.8	10,700	8,400	466.8	453.4
On Back	1,800	1,200	118.8	98.4	100	–	4.0	–	1,900	1,200	122.8	98.4
Old Age	6,500	5,700	429.0	467.4					6,500	5,700	429.0	467.4
Theft	700	1,000	46.2	82.0	2,200	1,000	88.6	48.8	2,900	2,000	134.8	130.8
Other	600	900	39.6	73.8	1,500	2,500	60.4	122.1	2,100	3,400	100.0	195.9
Total Non-Predators	18,800	16,000	1,240.8	1,312.0	35,000	30,900	1,409.1	1,509.2	53,800	46,900	2,649.9	2,821.2
Unknown Causes	3,600	3,300	237.6	270.6	3,700	4,700	149.0	229.5	7,300	8,000	386.6	500.1
Total Loss	29,000	25,000	1,914.0	2,050.0	75,000	67,000	3,019.5	3,272.3	104,000	92,000	4,933.5	5,322.3

1/ Average reported value for Ewes 1+. 2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb. 3/ Totals may not add due to rounding. 4/ Data not available. – Denotes less than 100 head.

METHODOLOGY and DEFINITIONS

The sheep and lamb survey utilized multi-frame sampling procedures. The survey involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure assures complete coverage of sheep producers by accounting for ranchers/farmers who may not be on the list.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report includes an estimate of lambs lost before docking as well.

COOPERATION

This study was undertaken at the request of the Montana Wool Growers Association who also provided funding. The Montana Agricultural Statistics Service conducted the survey and expresses appreciation to all cooperating sheep producers.

SHEEP & LAMBS: Inventory, Death Losses, and Value of Losses, Montana, 1986-1995

Year	Jan. 1 Sheep & Lamb Inventory (000 head)	Lamb Crop (000 head)	DEATH LOSSES					
			All Sheep Losses (000 head)	LAMBS (000 head)			All Sheep & Lamb Losses (000 hd.)	
				Before Docking	After Docking	All Lambs	Total Loss	% Jan. 1 Inventory & Lambs Born 1/
1986	523	450	45	45	42	87	132.0	13.0
1987	563	440	45	47	45	92	137.0	13.0
1988	597	460	50	53	47	100	150.0	13.5
1989	600	500	43	55	43	98	141.0	12.2
1990	663	535	40	53	40	93	133.0	10.6
1991	683	585	42	54	46	100	142.0	10.7
1992	678	510	35	39	38	77	112.0	9.1
1993	564	480	35	36	37	73	108.0	10.0
1994	534	465	29	35	40	75	104.0	10.1
1995	490	410	25	34	33	67	92.0	9.9

Year	Predator Losses (000 head)		Non-Predator Loss (000 hd)	Unknown Causes (000 head)	VALUE OF LOSSES (000 dollars)			
	Total Loss	% Jan. 1 Inventory & Lambs Born 1/			Predator	Non-Predator	Unknown	Total 2/
1986	42.1	4.1	72.1	17.8	2,051.1	3,437.9	920.0	6,409.1
1987	36.9	3.5	79.8	20.3	2,260.6	4,825.4	1,343.0	8,428.9
1988	43.1	3.9	84.7	22.2	2,519.7	5,115.3	1,386.6	9,021.6
1989	35.9	3.1	80.8	24.3	1,956.4	4,264.8	1,405.0	7,626.2
1990	39.1	3.1	79.9	14.0	1,491.1	3,586.1	659.8	5,737.0
1991	44.9	3.4	83.5	13.6	1,590.0	3,179.6	550.4	5,320.0
1992	41.2	3.4	63.0	7.8	1,593.6	2,696.0	374.6	4,664.1
1993	40.2	3.7	59.4	8.4	1,767.7	2,891.8	418.8	5,078.2
1994	42.9	4.1	53.8	7.3	1,897.0	2,649.9	386.6	4,933.5
1995	37.1	4.0	46.9	8.0	2,001.0	2,821.2	500.1	5,322.3

1/ Lambs born equals lamb crop plus lambs lost before docking.
2/ Totals may not add because of rounding.

BIODIVERSITY ASSOCIATES
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April 18, 1996

Representative Jim Saxton,
U.S. House Subcommittee on Fisheries, Wildlife, and Oceans
Washington, DC 20515

Dear Representative Saxton:

I wanted to write and thank you for the invitation to appear last week in Gillette during the hearing on predator control. I appreciate your taking time to travel to Wyoming and facilitate this important discussion. You indicated that the Hearing Record would remain open for 10 days following oral testimony, and I wanted to take advantage of this opportunity to submit the following information on issues discussed at the hearing which I felt needed further clarification. I hope you will take the time to read what we have written and let me know if you have any questions.

(1) Wyoming Department of Agriculture (and Wyoming Farm Bureau) request for a $900,000 block grant of federal money without restrictions.

In its testimony, the state Dept. of Ag. indicated it wants the ADC budget but is not interested in administering the program unless it can be assured of "an attendant relaxation of the rules and regulations." This request is not consistent with federal environmental law and policy.

Furthermore, the request is not representative of what most Wyoming people want. Ag operators, including both farmers and ranchers, total 2,500 in our state; that amounts to 0.5% of our residents. (Casper Star Tribune, 7/23/95). Wyoming people *as a whole* do not want more indiscriminate killing of native wildlife, including coyotes, and they are not willing to see a reduction in environmental protection. For example, there has been overwhelming opposition from ordinary citizens to the use of M-44 devices because people have lost pet dogs which were mistakenly poisoned. Also, an opinion poll done by the Survey Research Center on the University of Wyoming campus reported last year that 61% of Wyoming residents *approved* of the federal government's efforts to improve the environment. Only 14% perceived a worsening. (Casper Star Tribune, 4/8/95).

We can understand why the livestock industry might be motivated to make this request out of their special interest; what I want to underscore for you is the evidence which demonstrates their view is not shared by the majority of Wyoming citizens. Because we hear them all the time, we are familiar with the industry buzzwords "local control," "states rights," "flexibility" and "over-regulation," but I want to assure your Committee our citizens are not fooled by this kind of rhetoric. We want -- and expect -- industries operating in Wyoming to be held accountable under our country's environmental laws.

(2) Claims that agriculture is the second largest industry in Wyoming are unfounded.

The director of the state Dept. of Agriculture gave the impression last week at the Gillette hearing that ag ranks close in importance to tourism in Wyoming's economy. This is not true. The state Division of Economic Analysis reported agriculture ranked 9th in total employment, 10th in labor and earnings, and 9th in average annual earnings. (Wyoming Dept. of Administration Report, 6/30/95, see attached). Industries that ranked higher than agriculture in importance to Wyoming's economy included, among

other sectors, retail trade, services, government, mining and transportation. Earnings from all of agriculture -- farming, ranching, forestry, and fisheries -- totalled $289.5 million in 1994. The state forecast for economic growth has projected declines in constant dollar earnings will occur throughout the agricultural sector over the next twelve years.

Tourism on the other hand has been forecast to increase. The Wyoming Tourism Division reported visitors to Wyoming in 1994 equalled 7 million. These people spent $1.7 billion, created the equivalent of 40,634 full-time jobs and generated $670 million dollars income for the state. (WY Tourism Division, reported in Casper Star Tribune, 5/4/95). As you know, the overwhelming number of these visitors came to see Wyoming's wildlife, including its coyotes, eagles and other species which are presently targeted by livestock owners and killed with ADC dollars.

(3) Ranchers claiming they will go out of business without predator control are examples of non-sustainable operations.

Big livestock operations exemplify the failures inherent in the ADC "predator control" program. These include ranches like the Walton which graze over 2000 head of cattle on public lands. They make money off the backs of the public's wildlife by claiming substantial losses due to grizzly bear predation. By their own admissions, the big ranches exemplify operations which will *go out of business* without predator control. They are not sustainable. Ranching operations which have only managed to keep themselves in business over the years by demanding, and receiving, thousands of dollars of compensation, should not be further subsidized.

The best solution to the "predator" problem on the Bridger-Teton National Forest and other public lands is to keep defenseless domesticated animals out of areas of historically high predation. And regarding what is affecting the economic status of cattle businesses, we submit it is *not competition with wildlife* but other factors such as the importation of livestock on the global market which are undermining profits. In 1994 to 1995 the U.S. imported 251,000 metric tons of Australian beef. Imports of live cattle from Canada and Mexico represented 2.9 million head and 3.4 million head. (Casper Star Tribune, 4/1/96). Continuing ADC subsidies will do nothing to improve this situation.

(4) Killing predators to increase game animal herds is not cost effective and unwarranted.

You expressed concern about the degree to which wild predators are responsible for declines in big game populations. I would like to underscore the importance of testimony already in the record from our group, from Wyoming Wildlife Federation, and from the Wyoming Game and Fish Dept. indicating that loss of habitat (not predation) is the major cause for population declines in Wyoming game animals.

In addition to this, it is also important to note that predator control, when used, has not proven to be cost effective. A Wyoming Game and Fish Dept. 1989 analysis of predator control reported that killing coyotes cost $59.12 per fawn versus $33.35 per deer value returned to the state economy. This amounted to a net loss of $25.77 per animal. With pheasant populations, the ratio was $9700 cost vs. $6300 benefit resulting in a net loss of $34.50 per unit. The conclusion of the report was the current methods of measuring success of predator control in reducing predation show it is not cost effective. (A White Paper on Wildlife Related Predator Control, WY Game and Fish Dept., 1989).

Overall, lethal predator control cannot be justified economically. For instance, consider aerial gunning, the method used by ADC to kill the most coyotes for predator control purposes in Wyoming. Over the

period 1984-1994, the ADC "take per hour" by fixed wing aerial hunting in the Bighorn Basin in Wyoming ranged from 0.7 to 1.8 coyotes shot per hour. Given the cost of airplane, pilot and gunner, this results in an estimated cost of $75 to $100 for each coyote shot in Wyoming. (See BLM, Worland District, letter 1278(013), dated 6/23/96).

(5) Wyoming reports of livestock losses are exaggerated and unreliable.

There was a great deal of discussion last week about the "magnitude of the problem." A continuing question surrounds the statistics Congress and the media have been given regarding claimed losses. Of the top livestock producing states in the United States, Wyoming ranks 20th. Yet, in 1992, for example, Wyoming reported the highest number of livestock losses to coyotes, *nearly twice as many* as Texas, the first ranked livestock producing state in the country.

States with the ten highest reported coyote damages in 1992 were:

Rank	State	# lost to coyotes	Events Reported
#1	WY	7,194	
#2	MT	3,776	
#3	CA	4,183	
#4	TX	3,783	
#5	OR	3,157	
#6	UT	3,534	
#7	ND	1,944	
#8	ID	3,009	
#9	CO	3,198	
#10	OK	3,228	

There is no rational explanation for why Wyoming should have two times more coyote damage than states with more livestock (like California and Texas) and comparable coyote populations (like Montana and Idaho). The Wyoming livestock industry's loss claims have not been substantiated and should not be the basis for determining how much federal aid comes into the state via the ADC program. (Figures taken from National Agricultural Statistics Service, NASS, under contract to ADC and reprinted in "Audit of the USDA Animal Damage Control Program," Cascade Holistic Economic Consultants, Research Paper No.31, April 1994.)

Thank you again for this opportunity to comment. We urge Congress to **stop funding the massive ADC program as it currently exists with its emphasis on lethal methods.** This would mean significantly reducing the agency's overall budget and allocating a total, smaller amount of money for research, education and consultation on non-lethal methods.

Sincerely,

Leila Stanfield

Leila Stanfield

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FOR IMMEDIATE RELEASE
Friday, June 30, 1995
Contact: David Black, Economist

MODERATE ECONOMIC GROWTH FORECAST FOR WYOMING

CHEYENNE -- Wyoming's economy is projected to grow moderately, according to a report released by the Wyoming Department of Administration and Information, Division of Economic Analysis. The recently completed "Wyoming Economic Forecast Report" for 1995 indicates that total employment and income are both forecasted to grow over the next twelve years.

Total employment in Wyoming grows at an annual average rate of 1.4% from 1994 to 2005, compared to the U.S. average of 1.6% per year until 2003 and then 1.1% for the remainder of the forecast. Employment increases from 285,230 occupied jobs in 1993 to 338,100 in 2005, an increase of 52,870 jobs. The services sector will experience the most growth, at 2.6% per year. The service sector will continue as the state's largest employer, accounting for one out of every four jobs in Wyoming by 2005. The retail trade sector becomes the second largest employment sector in the year 2000, bumping the government sector to third. Mining employment, at its all-time high in 1981, encompassed 14.4% of the labor force in Wyoming. However, by the year 2005, mining is expected to involve only 6.3% of the labor force.

According to David Black, an economist with the Division of Economic Analysis, the majority of the jobs created over the next twelve years will be within the service and retail trade sectors. "More than 68%, or roughly 36,000 of the jobs created over the next 12 years will be in the service and retail trade sectors," Black said. The only sector projected to experience a decrease in employment is the agriculture sector.

Total labor and proprietor earnings grow at an annual average rate of 5.1% in current dollars, from $6.5 billion in 1993 to $11.7 billion in 2005. Earnings in constant dollars (inflation-adjusted using U.S. CPI-U for Western States) increase by an average of 1.7% per year. The greatest growth in earnings will occur in the manufacturing sector, with constant dollar earnings projected to increase by an average of 1.7% per year. Constant dollar annual earnings increase in the mining; manufacturing; transportation, communication, and public utilities (*TCPU*); wholesale trade, services, and government sectors. Declines in constant dollar earnings occur in the agriculture; construction; retail trade; and finance, insurance, and real estate (*FIRE*) sectors.

Total personal income (TPI) for residents, in current dollars, grows at an average annual rate of 4.8%, increasing from the 1993 level of $9.3 billion to $16.2 billion by 2005. TPI in

constant dollars increases at an average annual rate of 1.4% over the forecast. Per capita personal income (PCI), in current dollars, increases at an average rate of 3.9% annually, growing from $19,750 in 1993 to $31,230 in 2005. After adjusting for average annual inflation of 3.3%, constant dollar PCI increases by an average rate of 0.6% per year. Population grows slowly over the forecast, averaging 0.9% per year. Wyoming's population should exceed 500,000 persons in 2001, and should reach 519,980 in 2005. Inflation as measured by the CPI-U for Western States will run at an average of 3.3% per year. "We are forecasting that earnings, TPI, and PCI will grow at a rate greater than the inflation rate, leading to some real increases in disposable income." Black said.

The report also contains a more detailed look at the mining and agricultural sectors of the Wyoming economy. The mineral section looks at employment, earnings, price, and production for coal, oil and gas, trona/soda ash, and other minerals. The agricultural section forecasts employment and earnings in the farm sub-sector and the agricultural services, forestry, fisheries, and other sub-sector. Gross farm income, farm marketing receipts, beef marketings, and cattle prices are also forecasted.

The Wyoming Economic Forecast Report may also be obtained electronically via the Internet through the Wyoming Ferret gopher server or by connecting with the Ferret directly. Other information from the Division is also available on the Ferret. To connect with the Ferret, in Wyoming dial 1-800-264-1285. Outside of Wyoming or in Cheyenne, dial 777-6936. The Internet address for the Ferret is "gopher://ferret.state.wy.us".

The file is located in the Economic Analysis subdirectory. To reach the Forecast file, at the main Ferret menu chose:

-WYOMING STATE GOVERNMENT
-EXECUTIVE BRANCH
-OTHER DEPARTMENTS
-DEPARTMENT OF ADMINISTRATION AND INFORMATION
-ECONOMIC ANALYSIS DIVISION
-WYOMING ECONOMIC FORECAST

Copies of the full report are available upon request by contacting the Division of Economic Analysis at (307) 777-7504.

Wyoming Total Employment (In Thousands)

FORECASTED DATA	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total Employment	297.47	293.67	296.81	300.11	304.57	311.47	317.53	322.06	325.79	329.78	334.14	338.10
% Change	0.78%	-1.16%	1.07%	1.11%	1.49%	2.27%	1.94%	1.43%	1.16%	1.21%	1.34%	1.19%
Agriculture	16.61	16.56	16.59	16.64	16.68	16.78	16.72	16.64	16.66	16.62	16.61	16.57
% Change	-0.97%	-0.30%	0.24%	0.22%	-0.30%	-0.57%	-0.84%	-0.87%	0.06%	-0.05%	-0.11%	-0.23%
Mining	19.82	19.51	19.50	19.53	19.66	19.76	19.99	20.37	20.51	20.83	21.11	21.41
% Change	-0.82%	-0.53%	-0.08%	0.12%	0.14%	0.58%	1.16%	1.90%	1.15%	1.54%	1.37%	1.40%
Contract Construction	17.89	16.08	16.20	16.25	16.70	16.66	20.95	20.73	20.96	21.26	21.70	22.01
% Change	-1.00%	2.94%	0.69%	0.27%	2.49%	5.04%	3.76%	2.60%	1.09%	1.49%	2.04%	1.42%
Manufacturing	11.29	11.51	11.63	11.74	11.86	12.02	12.17	12.34	12.51	12.68	12.84	13.01
% Change	1.84%	1.90%	1.06%	0.97%	1.03%	1.35%	1.27%	1.37%	1.36%	1.34%	1.22%	1.31%
Transportation, Communication, & Public Utilities	16.16	16.67	16.77	16.89	17.19	17.76	18.28	18.43	18.64	18.71	19.05	19.12
% Change	0.71%	3.19%	0.55%	0.70%	1.90%	3.75%	2.96%	3.00%	0.64%	0.40%	1.32%	0.36%
Wholesale Trade	7.87	8.30	8.37	8.40	8.57	8.33	9.54	9.81	9.89	10.07	10.29	10.44
% Change	-1.19%	5.44%	0.92%	0.32%	2.27%	0.29%	4.54%	2.78%	1.06%	1.50%	2.23%	1.42%
Retail Trade	52.79	54.77	55.40	56.13	57.44	58.48	61.11	57.92	62.89	63.49	64.50	65.29
% Change	0.96%	3.76%	1.21%	1.15%	2.34%	1.55%	2.74%	1.58%	1.08%	1.27%	1.58%	1.38%
Finance, Insurance & Real Estate	16.03	17.04	17.18	17.17	17.47	18.06	18.49	18.75	19.00	19.29	19.64	19.94
% Change	0.17%	6.32%	0.84%	-0.05%	1.72%	3.33%	2.44%	1.44%	1.35%	1.51%	1.85%	1.54%
Services	86.38	90.69	93.41	96.44	98.04	97.67	79.94	81.89	83.71	85.35	86.98	88.77
% Change	4.06%	4.98%	2.98%	3.25%	1.66%	-0.38%	3.14%	2.57%	2.22%	1.94%	1.94%	2.06%
Government	60.56	60.66	60.78	60.76	60.84	60.89	60.93	60.99	61.08	61.19	61.31	61.36
% Change	0.06%	0.16%	0.19%	0.04%	0.14%	0.07%	0.07%	0.10%	0.15%	0.18%	0.02%	0.08%

Total Labor & Proprietor Earnings by Industry (Millions of Current Dollars Except Where Noted Otherwise)

FORECASTED DATA	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total Labor & Proprietor Earnings by Place of Work	$6,760.36	$7,104.43	$7,476.75	$7,842.75	$8,236.72	$8,707.57	$9,182.70	$9,641.39	$10,117.71	$10,621.86	$11,178.27	$11,745.19
% Change	4.89%	5.09%	5.23%	4.90%	4.83%	5.72%	5.45%	5.00%	4.94%	5.00%	5.24%	5.07%
Tot. Labor & Prop. Earnings by Place of Work (1982-84 $)	$4,478.99	$4,571.60	$4,663.28	$4,750.70	$4,814.70	$4,830.87	$5,088.89	$5,194.82	$5,274.03	$5,368.26	$5,458.29	$5,451.38
% Change	0.89%	2.11%	2.01%	1.87%	1.35%	2.41%	2.06%	1.49%	1.90%	1.79%	1.68%	1.81%
Agriculture	$289.60	$288.00	$287.26	$285.70	$284.45	$283.58	$287.38	$284.80	$285.23	$282.29	$279.86	$400.09
% Change	-12.28%	-7.42%	7.19%	5.87%	-2.78%	-0.19%	-0.89%	1.14%	0.20%	7.26%	0.92%	-0.77%
Agriculture (1982-84 $)	$191.72	$179.45	$179.19	$180.37	$179.96	$166.51	$160.89	$155.99	$153.05	$149.46	$144.86	$199.27
% Change	-15.10%	-10.06%	9.91%	2.27%	-6.96%	-3.38%	-4.11%	-2.81%	-3.18%	-1.53%	-3.08%	-3.86%
Mining	$1,147.54	$1,186.07	$1,293.11	$1,296.28	$1,327.24	$1,378.68	$1,441.35	$1,502.29	$1,576.57	$1,659.04	$1,745.81	$1,841.35
% Change	8.06%	3.14%	4.19%	4.81%	3.19%	3.87%	4.59%	4.18%	4.76%	5.43%	5.23%	5.48%
Mining (1982-84 $)	$752.00	$781.69	$789.20	$778.76	$778.96	$781.11	$780.33	$796.41	$804.79	$820.38	$830.38	$864.70
% Change	1.54%	0.21%	1.00%	1.34%	-0.24%	0.553	1.18%	0.64%	1.17%	1.939	1.35%	2.30%
Contract Construction	$429.94	$460.13	$479.89	$468.04	$492.31	$508.18	$607.48	$636.39	$654.44	$686.86	$732.70	$767.26
% Change	2.05%	7.02%	4.29%	3.78%	5.45%	3.12%	6.53%	4.76%	4.41%	4.74%	6.28%	4.72%
Contract Const. (1982-84 $)	$284.78	$296.08	$299.56	$301.53	$307.42	$321.90	$342.98	$356.96	$359.79	$364.09	$361.02	$368.14
% Change	-1.39%	3.96%	1.10%	0.76%	1.95%	4.71%	3.41%	1.19%	0.84%	1.27%	2.01%	1.49%
Manufacturing	$347.35	$369.45	$393.03	$415.30	$437.38	$462.12	$494.64	$525.70	$560.98	$598.82	$638.15	$680.30
% Change	5.82%	6.37%	6.37%	5.84%	5.34%	5.65%	5.84%	6.48%	6.51%	6.59%	6.63%	6.59%
Manufacturing (1982-84 $)	$280.08	$297.76	$316.17	$331.38	$346.01	$363.55	$371.13	$378.87	$386.58	$395.93	$395.72	$416.74
% Change	4.74%	6.36%	6.19%	4.84%	4.34%	5.05%	2.07%	2.06%	2.07%	2.36%	2.31%	2.28%
Transportation, Communication, & Public Utilities	$643.55	$691.77	$781.84	$767.38	$818.71	$883.58	$948.68	$996.38	$1,044.84	$1,108.77	$1,168.90	$1,231.04
% Change	4.96%	7.96%	5.68%	4.96%	6.31%	8.21%	7.36%	5.46%	5.00%	6.39%	5.84%	5.97%
Transport., Comm. & Public Utilities (1982-84 $)	$425.52	$445.13	$460.01	$464.54	$477.45	$500.09	$518.90	$528.61	$536.11	$548.74	$550.70	$571.44
% Change	1.49%	4.61%	3.45%	1.87%	2.78%	4.85%	3.77%	1.87%	1.42%	1.79%	3.60%	3.12%
Wholesale Trade	$314.79	$336.24	$347.99	$370.84	$376.58	$309.18	$324.47	$363.80	$373.47	$402.36	$419.21	$441.32
% Change	3.46%	9.59%	5.42%	6.78%	7.35%	10.48%	8.54%	5.78%	5.38%	5.81%	6.22%	5.54%
Wholesale Trade (1982-84 $)	$142.35	$151.37	$164.08	$167.80	$168.36	$174.80	$183.34	$187.53	$190.46	$194.48	$200.35	$204.86
% Change	0.03%	6.42%	2.10%	1.70%	3.78%	6.95%	5.00%	2.19%	1.58%	2.10%	2.92%	2.25%
Retail Trade	$672.40	$716.60	$764.05	$798.84	$852.46	$907.78	$969.21	$982.56	$1,087.48	$1,177.30	$1,122.86	$1,171.58
% Change	4.62%	6.54%	4.80%	4.52%	6.71%	6.05%	5.80%	4.80%	4.37%	4.45%	4.75%	4.41%
Retail Trade (1982-84 $)	$448.96	$463.86	$470.56	$477.66	$487.26	$503.02	$514.86	$520.23	$534.41	$579.67	$587.65	$543.84
% Change	1.16%	3.82%	1.60%	1.55%	2.01%	3.24%	2.35%	1.04%	0.80%	0.90%	1.84%	1.17%
Finance, Insurance & Real Estate	$267.86	$279.98	$288.91	$294.02	$307.31	$324.00	$343.55	$358.81	$374.13	$391.13	$410.26	$429.18
% Change	2.37%	4.53%	4.00%	3.56%	4.52%	5.09%	5.41%	4.41%	4.27%	4.55%	4.89%	4.60%
Finance, Insurance & Real Estate (1982-84 $)	$170.84	$175.66	$177.10	$178.01	$179.87	$184.71	$188.86	$189.99	$191.32	$193.38	$196.56	$199.30
% Change	-1.18%	2.83%	0.82%	0.51%	1.05%	2.69%	1.86%	0.60%	0.71%	1.08%	1.63%	1.39%
Services	$1,198.80	$1,283.02	$1,389.83	$1,466.83	$1,561.81	$1,643.04	$1,740.53	$1,846.53	$1,957.87	$2,068.40	$2,185.03	$2,313.13
% Change	8.14%	7.03%	8.77%	5.59%	6.39%	5.87%	5.63%	6.09%	6.04%	5.64%	5.64%	5.86%
Services (1982-84 $)	$799.31	$825.59	$854.48	$887.28	$908.87	$960.36	$954.04	$977.66	$1,001.97	$1,021.66	$1,049.80	$1,073.73
% Change	4.56%	2.99%	3.50%	3.84%	2.39%	2.49%	1.48%	2.48%	2.41%	2.14%	3.36%	2.57%
Government	$1,558.42	$1,620.73	$1,695.55	$1,768.91	$1,856.13	$1,948.82	$2,042.93	$2,141.34	$2,244.96	$3,347.69	$3,458.54	$2,570.22
% Change	4.50%	4.00%	4.62%	4.33%	4.97%	5.02%	4.86%	4.82%	4.84%	4.57%	4.58%	4.67%
Government (1982-84 $)	$1,032.00	$1,043.90	$1,067.78	$1,070.98	$1,085.85	$1,100.85	$1,118.73	$1,130.77	$1,148.05	$1,158.74	$1,170.36	$1,189.87
% Change	1.10%	1.06%	1.42%	1.36%	1.39%	1.07%	1.48%	1.05%	1.58%	1.11%	1.24%	1.48%

Prepared by: Division of Economic Analysis, State of Wyoming

Wyoming Personal Income (Millions of Current Dollars Except Where Noted Otherwise)

FORECASTED DATA	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total Personal Income												
by Place of Residence	$9,021.44	$10,129.10	$10,506.99	$10,848.96	$11,447.16	$12,230.22	$13,073.01	$13,966.58	$14,205.78	$14,866.58	$15,530.32	$16,236.09
% Change	2.66%	6.84%	3.75%	3.23%	5.51%	6.42%	6.32%	6.69%	4.28%	4.42%	4.66%	4.14%
Total Personal Income by												
Place of Residence (1982-84 $)	$6,305.59	$6,517.79	$6,566.80	$6,568.35	$6,700.89	$6,967.06	$7,195.73	$7,348.89	$7,296.29	$7,304.73	$7,460.56	$7,586.61
% Change	-0.74%	3.37%	0.68%	0.02%	2.01%	3.98%	2.85%	2.13%	-0.72%	0.05%	1.42%	0.81%
Population (Thousands)	476.9	480.6	482.7	484.8	491.3	494.1	498.5	504.1	509.4	515.3	516.5	519.8
% Change	1.24%	0.84%	0.43%	1.16%	0.58%	0.60%	0.80%	1.22%	1.06%	0.77%	0.23%	0.65%
Per Capita Personal Income												
by Residence (Thousands $)	$20.00	$21.07	$21.77	$22.32	$23.31	$24.89	$26.25	$27.19	$28.03	$28.85	$30.18	$31.39
% Change	1.30%	5.35%	3.31%	2.56%	4.41%	6.78%	5.47%	3.53%	3.15%	2.92%	4.61%	3.97%
Per Capita Personal Income												
by Res (Thousands 1982-84 $)	$13.25	$13.56	$13.58	$13.46	$13.64	$14.10	$14.39	$14.58	$14.32	$14.26	$14.46	$14.60
% Change	-2.06%	2.66%	0.15%	-0.96%	1.42%	3.38%	2.04%	1.09%	-0.87%	-0.43%	0.78%	0.95%
Consumer Price Index												
West States (1982-84 = 100)	151.00	155.43	160.31	166.17	170.85	176.49	183.44	188.87	195.55	202.26	208.78	216.43
% Change	3.42%	2.92%	3.16%	3.53%	2.44%	3.30%	3.77%	2.53%	3.43%	3.30%	3.11%	3.51%

Wyoming Average Annual Earnings by Industry (Thousands of Dollars)

FORECASTED DATA	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
All Sectors Ave. (Cur. $)	$25.52	$26.19	$25.19	$26.15	$27.01	$27.94	$28.92	$29.94	$31.00	$32.24	$33.46	$34.74
% Change	2.58%	2.67%	4.11%	3.81%	3.30%	3.45%	3.51%	3.52%	3.74%	3.97%	3.78%	3.84%
All Sectors Avg. (1982-84 $)	$18.67	$18.67	$18.71	$18.83	$18.91	$18.83	$18.87	$18.85	$18.85	$18.84	$18.87	$18.13
% Change	0.11%	-0.03%	0.23%	0.76%	0.41%	0.14%	0.13%	-0.01%	0.02%	0.02%	0.14%	0.61%
Agriculture (Cur. $)	$17.14	$16.16	$17.81	$17.87	$17.44	$17.51	$17.43	$17.50	$17.48	$17.86	$17.83	$17.79
% Change	-5.85%	-5.54%	9.23%	3.19%	-2.30%	0.39%	-0.53%	0.45%	-0.09%	2.11%	0.13%	-0.26%
Agriculture (1982-84 $)	$13.36	$10.42	$10.80	$10.83	$10.31	$9.92	$9.55	$9.36	$8.95	$8.91	$8.87	$8.26
% Change	-11.69%	-9.22%	3.68%	0.15%	-5.00%	-3.83%	-3.79%	-1.90%	-4.43%	-1.28%	-1.86%	-3.64%
Mining (Cur. $)	$58.50	$60.66	$63.25	$65.89	$67.89	$68.76	$71.17	$74.17	$76.71	$79.68	$82.68	$86.91
% Change	5.61%	3.69%	4.30%	4.17%	3.04%	2.29%	3.37%	3.85%	3.41%	3.86%	3.79%	4.02%
Mining (1982-84 $)	$38.74	$38.03	$39.45	$39.88	$39.74	$37.53	$39.53	$38.87	$38.38	$38.39	$38.81	$39.89
% Change	2.19%	0.75%	1.07%	1.11%	-0.39%	-5.58%	0.00%	-0.85%	-0.13%	0.41%	0.57%	0.79%
Contract Construction (Cur. $)	$24.73	$25.45	$26.87	$27.39	$28.09	$28.91	$29.80	$30.71	$31.71	$32.78	$33.77	$34.87
% Change	3.18%	2.90%	5.59%	1.91%	2.52%	2.93%	3.06%	3.06%	3.26%	3.39%	3.10%	3.25%
Contract Const. (1982-84 $)	$13.37	$13.38	$13.45	$13.52	$13.44	$13.38	$13.33	$13.26	$13.22	$13.18	$13.18	$13.16
% Change	-0.80%	0.04%	0.48%	0.40%	-0.59%	-0.39%	-0.37%	-0.46%	-0.30%	-0.32%	-0.02%	0.04%
Manufacturing (Cur. $)	$30.78	$33.11	$34.80	$36.37	$38.08	$38.70	$40.64	$42.69	$44.85	$47.18	$49.71	$52.30
% Change	8.37%	4.39%	5.12%	4.53%	4.72%	4.33%	5.02%	5.04%	5.06%	5.21%	5.36%	5.21%
Manufacturing (1982-84 $)	$20.57	$20.66	$21.00	$21.41	$21.65	$21.23	$22.37	$22.80	$23.63	$23.84	$23.82	$24.36
% Change	2.84%	1.43%	2.06%	1.96%	0.80%	-1.68%	1.69%	1.47%	1.42%	1.74%	2.07%	1.94%
Transportation, Communication,												
& Public Utilities (Cur. $)	$39.78	$41.48	$43.60	$46.68	$47.86	$49.76	$51.93	$54.16	$56.54	$59.00	$61.64	$64.40
% Change	5.71%	4.83%	5.10%	4.70%	4.33%	4.40%	4.39%	4.38%	4.36%	4.36%	4.46%	4.48%
Transportation, Communication,												
& Public Utilities (1982-84 $)	$28.33	$28.70	$27.30	$27.66	$27.90	$28.18	$28.46	$28.69	$28.91	$29.17	$29.53	$29.98
% Change	2.91%	1.28%	1.69%	1.69%	0.87%	1.00%	0.96%	0.80%	0.76%	0.90%	1.26%	1.54%
Wholesale Trade (Cur. $)	$27.30	$28.35	$29.63	$30.94	$32.17	$33.61	$34.80	$36.05	$37.55	$39.07	$40.64	$42.28
% Change	4.70%	3.87%	4.45%	4.45%	4.00%	4.54%	3.52%	3.59%	4.17%	4.05%	4.00%	4.05%
Wholesale Trade (1982-84 $)	$19.06	$19.35	$19.48	$19.73	$19.83	$19.93	$19.01	$19.09	$19.30	$19.33	$19.47	$19.68
% Change	1.24%	0.92%	1.98%	1.33%	0.54%	0.53%	0.41%	0.38%	0.01%	0.09%	0.77%	0.61%
Retail Trade (Cur. $)	$13.76	$13.14	$13.80	$14.08	$14.49	$14.83	$15.17	$15.54	$15.96	$16.37	$17.10	$17.94
% Change	3.63%	2.99%	5.44%	2.41%	3.10%	2.99%	2.34%	2.05%	3.25%	3.15%	3.11%	3.15%
Retail Trade (1982-84 $)	$8.45	$8.46	$8.48	$8.51	$8.48	$8.46	$8.43	$8.39	$8.36	$8.34	$8.33	$8.32
% Change	0.20%	0.06%	0.29%	0.40%	-0.39%	-0.30%	-0.30%	-0.46%	-0.35%	-0.27%	-0.09%	-0.06%
Finance, Insurance &												
Real Estate (Cur. $)	$15.53	$16.02	$16.57	$17.12	$17.53	$18.06	$18.59	$19.13	$19.69	$20.28	$20.89	$21.52
% Change	2.06%	3.12%	3.44%	3.30%	2.39%	3.02%	2.91%	2.89%	2.90%	2.99%	3.00%	3.02%
Finance, Insurance &												
Real Estate (1982-84 $)	$10.28	$10.31	$10.34	$10.37	$10.30	$10.33	$10.16	$10.13	$10.07	$10.08	$10.07	$9.99
% Change	-1.29%	0.29%	0.29%	0.26%	-0.69%	-0.27%	-0.45%	-0.31%	-0.54%	-0.12%	-0.10%	-0.79%
Services (Cur. $)	$17.56	$18.36	$18.92	$19.70	$20.41	$21.10	$21.80	$22.55	$23.29	$24.04	$25.12	$26.06
% Change	3.92%	3.89%	4.06%	4.13%	3.61%	3.39%	3.31%	3.44%	3.74%	3.67%	3.63%	3.74%
Services (1982-84 $)	$11.63	$11.70	$11.80	$11.92	$11.97	$11.96	$11.95	$11.94	$11.96	$11.99	$12.05	$12.10
% Change	0.42%	0.56%	0.90%	1.06%	0.47%	0.09%	-0.05%	-0.09%	0.19%	0.30%	0.41%	0.51%
Government (Cur. $)	$24.78	$25.72	$27.02	$28.11	$29.49	$32.00	$33.58	$35.13	$36.76	$38.50	$40.11	$41.86
% Change	5.51%	3.84%	4.50%	4.37%	4.79%	8.52%	4.77%	4.73%	4.60%	4.41%	4.50%	4.57%
Government (1982-84 $)	$17.04	$17.19	$17.42	$17.63	$17.86	$19.18	$19.36	$19.59	$19.80	$19.98	$19.22	$19.46
% Change	1.04%	0.89%	1.31%	1.20%	1.25%	1.52%	1.50%	1.16%	1.11%	0.88%	1.26%	1.24%
Consumer Price Index												
West States (1982-84 = 100)	151	155.4009	160.3108	166.1702	170.846	176.4915	183.4378	188.8888	195.5478	202.257	208.7848	216.4297
% Change	3.42%	2.92%	3.16%	3.53%	2.44%	3.30%	3.77%	2.53%	3.43%	3.30%	3.21%	3.51%

Prepared by: Division of Economic Analysis, State of Wyoming

Wyoming Mining Sector Data

FORECASTED DATA	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Employment (Thousands)												
Total Mining	19.82	19.91	19.80	19.63	19.55	19.78	19.99	20.25	20.51	20.83	21.11	21.41
% Change	-0.52%	-0.03%	-0.06%	0.19%	0.14%	1.09%	1.19%	1.30%	1.29%	1.59%	1.37%	1.40%
Coal Mining	4.63	4.47	4.35	4.34	4.38	4.36	4.42	4.50	4.61	4.70	4.80	4.92
% Change	3.18%	-3.42%	-2.05%	-0.89%	0.82%	0.55%	1.03%	1.73%	1.70%	1.71%	2.07%	2.50%
Oil & Gas Extraction	10.53	10.60	10.70	10.81	10.93	11.12	11.32	11.50	11.67	11.83	12.00	12.14
% Change	-0.50%	0.84%	0.89%	1.01%	1.04%	1.79%	1.79%	1.61%	1.48%	1.42%	1.38%	1.20%
Trona/Soda Ash	3.04	3.11	3.16	3.22	3.21	3.29	3.37	3.45	3.53	3.61	3.69	3.77
% Change	-0.10%	2.19%	2.09%	1.64%	-0.24%	2.53%	2.34%	2.26%	2.21%	2.18%	2.19%	2.26%
All Other Mining	1.62	1.93	1.34	1.16	1.05	0.97	0.89	0.81	0.74	0.68	0.63	0.58
% Change	-5.49%	-5.99%	-6.53%	-6.53%	-7.85%	-8.52%	-8.91%	-9.06%	-8.18%	-7.93%	-7.58%	-8.10%
Gross Production (Millions) (1)												
Coal (Tons)	295.00	345.50	355.80	367.50	378.60	388.36	398.32	404.30	411.00	421.51	431.98	442.38
% Change	11.90%	4.47%	4.48%	4.44%	4.49%	3.49%	2.81%	3.49%	3.95%	3.40%	2.89%	2.41%
Natural Gas (MCF)	1,069.97	1,091.40	1,112.30	1,135.50	1,158.30	1,176.04	1,196.92	1,222.74	1,249.36	1,276.87	1,310.03	1,340.86
% Change	1.46%	2.00%	2.00%	2.00%	2.00%	1.54%	1.78%	2.16%	2.17%	2.32%	2.46%	2.35%
Petroleum (bbls)	78.00	70.50	68.30	66.20	51.30	49.10	47.22	44.70	43.49	40.27	38.08	36.08
% Change	-13.98%	-10.00%	-3.07%	-3.07%	-10.00%	-4.11%	-3.83%	-5.31%	-5.09%	-5.54%	-5.40%	-5.29%
Soda Ash (Tons)	8.80	9.02	9.24	9.41	9.61	9.67	9.94	10.21	10.49	10.78	11.07	11.38
% Change	0.10%	2.50%	2.44%	1.70%	2.00%	0.65%	2.71%	2.70%	2.76%	2.72%	2.67%	2.76%
Prices (1)												
Wyo. Coal (Cur. $/Ton)	$6.70	$6.54	$6.43	$6.31	$6.19	$6.38	$6.56	$6.82	$7.07	$7.36	$7.66	$7.98
% Change	-0.47%	-2.39%	-1.69%	-1.87%	-1.90%	3.01%	2.81%	3.90%	3.67%	4.11%	4.13%	4.08%
Wyo. Coal (1982-1984 $/Ton)	$4.44	$4.31	$4.01	$3.87	$3.62	$3.61	$3.61	$3.61	$3.61	$3.64	$3.67	$3.70
% Change	-11.50%	-5.10%	-4.09%	-4.70%	-5.30%	-0.20%	-0.10%	0.07%	0.13%	0.80%	0.90%	0.85%
Wyo. Natural Gas (Cur. $/MCF)	$1.66	$1.56	$1.65	$1.65	$1.65	$1.78	$1.90	$2.06	$2.23	$2.40	$2.58	$2.74
% Change	-18.81%	0.00%	5.77%	0.00%	0.00%	7.99%	7.84%	8.16%	7.71%	7.42%	7.59%	6.46%
Wyo. Natural Gas (1982-1984 $/MCF)	$1.23	$1.00	$1.00	$1.00	$0.97	$1.01	$1.05	$1.10	$1.14	$1.19	$1.23	$1.27
% Change	-16.87%	-9.84%	5.44%	-2.94%	-3.27%	4.48%	4.73%	4.60%	3.89%	3.86%	3.86%	3.24%
Wyo. Petroleum (Cur. $/Bbl)	$18.56	$19.30	$13.50	$13.50	$12.50	$14.80	$16.00	$17.17	$18.33	$19.83	$20.41	$21.48
% Change	-6.34%	4.00%	0.00%	0.00%	0.00%	9.60%	8.74%	6.76%	6.77%	8.00%	8.51%	8.32%
Wyo. Petroleum (1982-1984 $/Bbl)	$8.99	$8.69	$6.43	$6.17	$7.30	$8.59	$8.83	$9.08	$9.34	$9.58	$9.78	$9.98
% Change	-9.65%	-3.41%	-3.05%	-2.94%	-3.23%	6.09%	5.90%	5.11%	5.65%	5.49%	5.39%	5.06%
Wyo. Soda Ash (Cur. $/Ton)	$75.40	$75.40	$75.40	$75.40	$75.40	$76.16	$78.16	$81.16	$84.39	$87.77	$91.35	$94.89
% Change	-0.01%	0.00%	0.00%	0.00%	0.00%	2.00%	2.85%	3.92%	3.98%	4.01%	3.99%	3.89%
Wyo. Soda Ash (1982-1984 $/Ton)	$47.85	$46.59	$45.18	$43.83	$42.48	$42.84	$43.63	$43.98	$43.15	$43.40	$43.73	$44.08
% Change	-1.29%	-2.64%	-3.00%	-2.94%	-3.23%	0.85%	1.85%	0.80%	0.41%	0.56%	0.74%	0.80%
Consumer Price Index												
West States (1982-1984 = 100)	161.00	166.41	169.81	165.17	170.86	176.49	183.44	188.87	195.56	202.26	208.73	215.43
% Change	2.43%	2.99%	2.16%	2.00%	3.44%	3.30%	3.37%	2.93%	3.54%	3.47%	3.20%	3.21%

(1) The price and production forecasts from 1994 through 1998 are based on the January 1995, Consensus Revenue Authorizing Group forecast.

Wyoming Agriculture Sector Data

FORECASTED DATA	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Employment (Thousands)												
Total Agriculture	16.89	16.65	16.59	16.54	16.56	16.78	16.78	16.84	16.86	16.92	16.91	16.87
% Change	-2.97%	-2.00%	0.34%	0.13%	-0.30%	-0.57%	-0.04%	0.67%	0.26%	0.36%	-0.11%	-0.22%
Total Farm	13.78	13.81	13.49	13.76	13.78	13.81	13.84	13.86	13.70	13.71	13.69	13.64
% Change	-4.84%	-2.09%	-0.19%	2.02%	0.16%	0.23%	0.19%	0.15%	-1.15%	0.09%	-0.13%	-0.31%
Ag. Services, Forestry, Fisheries, & Other	4.11	4.04	4.10	4.10	4.10	4.17	4.17	4.18	4.18	4.21	4.22	4.23
% Change	-1.17%	-1.71%	1.59%	1.59%	-0.00%	0.19%	-0.06%	0.57%	0.20%	0.69%	0.19%	0.04%
Farm Income & Marketing Receipts (Millions of $)												
Gross Farm Income (Cur. $)	$868.78	$780.48	$850.93	$833.91	$828.11	$858.00	$835.43	$840.21	$859.78	$892.27	$1,000.27	$1,002.78
% Change	-2.10%	-8.90%	9.79%	5.49%	-0.46%	1.00%	-0.37%	1.49%	1.09%	3.89%	0.89%	0.24%
Gross Farm Income (1982-1984 $)	$514.02	$508.65	$536.41	$504.83	$443.80	$531.47	$512.74	$507.69	$490.98	$490.60	$479.36	$465.49
% Change	-9.27%	-11.20%	5.48%	5.20%	-1.70%	-3.23%	-3.52%	-1.00%	-3.26%	-0.04%	-2.31%	-2.87%
Farm Mktg. Rcpts. (Cur. $)	$787.21	$787.58	$746.19	$819.26	$824.37	$840.30	$850.72	$853.28	$853.79	$842.23	$834.33	$830.84
% Change	-6.04%	-4.21%	2.26%	9.81%	0.74%	1.93%	-0.00%	-0.19%	-1.90%	5.20%	-0.93%	-1.82%
Farm Mktg. Rcpts. (1982-1984 $)	$508.55	$488.40	$464.50	$495.48	$483.53	$470.06	$460.28	$441.80	$430.70	$416.47	$398.71	$381.05
% Change	-9.16%	-7.90%	-4.77%	9.80%	-9.61%	-1.84%	-3.31%	-4.11%	-4.57%	-1.03%	-4.23%	-4.57%
Commodity Marketings (Millions of Pounds)												
Beef Marketings	726.78	741.53	726.84	727.26	721.04	727.11	744.71	738.72	722.63	723.52	710.53	704.03
% Change	1.19%	0.34%	-1.97%	1.31%	-2.39%	3.23%	1.07%	-0.81%	-2.03%	-0.19%	-0.80%	-1.72%
Beef Prices ($/100 Lbs.)												
U.S. - All Cattle (Cur. $)	$68.32	$61.80	$64.61	$71.06	$73.40	$73.35	$73.44	$72.08	$72.00	$74.02	$73.87	$73.13
% Change	-8.94%	-9.56%	4.60%	9.99%	3.28%	-0.06%	0.10%	-1.86%	-0.10%	2.80%	-0.09%	-0.99%
U.S. - All Cattle (1982-1984 $)	$43.31	$38.82	$40.81	$43.80	$43.96	$41.50	$39.71	$38.16	$36.80	$36.80	$35.26	$33.84
% Change	-11.57%	-7.89%	5.11%	8.78%	0.35%	-5.59%	-4.33%	-3.90%	-3.53%	0.01%	-4.09%	-3.90%
Wyoming - All Cattle (Cur. $)	$74.34	$70.38	$72.50	$80.97	$82.87	$83.50	$82.86	$82.14	$82.05	$84.39	$83.87	$83.36
% Change	-8.87%	-5.35%	4.49%	10.50%	2.34%	-0.20%	-1.12%	-0.21%	-0.11%	2.84%	-0.61%	-0.61%
Wyoming - All Cattle (1982-1984 $)	$46.17	$44.27	$45.85	$49.93	$48.97	$47.31	$45.26	$43.49	$41.96	$41.78	$40.16	$38.59
% Change	-11.40%	-7.53%	1.39%	8.99%	-1.91%	-3.40%	-4.34%	-3.90%	-3.53%	-0.47%	-3.90%	-3.70%
Consumer Price Index												
West States (1982-1984 = 100)	161.00	166.41	169.81	165.17	170.86	176.49	183.44	188.87	195.56	202.26	208.73	215.43
% Change	2.43%	2.99%	2.16%	2.00%	3.44%	3.30%	3.37%	2.93%	3.54%	3.47%	3.20%	3.21%

Prepared by: Division of Economic Analysis, State of Wyoming

Statement of Wm. R. Taliaferro before Wyoming Game and Fish Commission
October 23, 1995

Wyoming Game and Fish Commission

First may I say thank you for letting me address your group on the problem of predation upon our livestock by Wyoming wildlife. I have since April 11, 1995 corresponded with this group quite often, maybe more than anyone really appreciates. However, my reason for writing is we have had, in the past and have received this spring and summer substantial takings of our livestock by public animals of which this Commission has been assigned responsibility for. I never wanted to submit a damage claim and was hopeful that the Game and Fish Department would remove problem animals before damage occurred and at least remove those causing damage after damage was occurring.

You received my first letter as mentioned above about mid April. I notified Department personnel in May we were having problems. I requested Department personnel to remove problem animals and make themselves available to verify the losses we were receiving each day. Both it was ever done except in the case where we were missing 10 lambs from a small bunch where the only predator tracks seen in the snow were from a mountain lion. At that time department personnel came to the ranch and made a verification attempt on lion damage.

I sent you a letter again on July 7, 1995 giving a summary of the losses our men observed through the period May 10, 1995 - June 30, 1995. This letter again requested the Department be directed to remove problem animals from our lands and around our livestock, come and verify losses and again nothing transpired except a letter from the Department stating damages are only paid on trophy game animal depredations.

Now I wish to present to the Commission my logic of why I feel the damages presented to this body, in the letter you have just received as of October 18, 1995, is justified, proper and right.

If we look at the statutes passed by the Wyoming Legislature and that which makes up State Law which governs this Commission and your Department you will find the following:

1. Title 23 deals with Game and Fish, Chapter 1 Administration, Article 1 General Provisions.

23-1-101 Definition of Wildlife

(viii) "Predatory animal" means coyote, jackrabbit, raccoon, red fox, wolf, skunk or stray cat.

23-1-103 Ownership of wildlife, purpose of act.

"For the purpose of the act, all wildlife in Wyoming is the property of the state. It is the purpose of this act and the policy of the state to provide an adequate and flexible system for control, propagation, management, protection, and regulation of all Wyoming wildlife. There shall be no private ownership of live animals classified in this act as big or trophy game animals."

Article 3. General Powers and Duties of The Commission. 140

23-1-302 Powers and Duties. The Commission is directed and empowered:

(viii) To authorize the chief game warden or his designee to kill any wildlife in Wyoming when in the judgement of the commission the killing is necessary or when the animals or birds are doing substantial damage to property. (in our case we have received more than substantial damage and nothing was done to relieve our property from depredation as directed by the Wyoming Legislature. Thus the Commission and Department's failing to abide by the law is replete with negligence, and failure to comply with the law caused us a terrible property loss.) (Please notice and re-read the bold type remember you are "directed and empowered to kill any wildlife in Wyoming when the animals or birds are doing substantial damage to property.)

The Wyoming Legislature has also mandated via state law in 23-3-103 (a) that, "Predatory animals and predacious birds may be taken without a license in any manner and at any time except as provided by W.S. (23-2-303(d), (23-3-112), (23-3-305) and (23-3-307). * The above deal with traps, time and identification. Type of weapon and shooting across others lands. Type of bait. Shooting from and across public roads and using firearms while under the influence of alcohol.

This Commission has failed to comply with the law. The Commission has failed to direct the Department and the Department failed to carry out the mandates of law expressed by the Wyoming State Legislature.

Under the United States Constitution, which each of you took an oath to uphold when you assumed your position as a Commissioner, is a small part of the Bill of Rights, the 5th. Amendment to the Constitution. The last part of this amendment states "nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation."

The 14th. Amendment to the Constitution in section 1 states: "All persons born or naturalized in the United States and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws."

Within the Wyoming Constitution Section 6 states: "No person shall be deprived of life, liberty or property without due process of law." Section 32 states: "Private property shall not be [illegible] or [illegible] use unless by consent of the [illegible] for private ways of necessity, and for [illegible] roads, flumes or ditches on or across [illegible] for agricultural, mining, milling, domestic or sanitary purposes, nor in any case without due compensation." And Section 33 states: " Private property shall not be taken or damaged for public or private use without just compensation."

I believe our claims to the Wyoming Game and Fish Department of $30,587.80 dollars are proper, in order and should be paid. I am requesting such compensation since there has been a takings of our private property by public animals under control of a Department of state government that has failed to do it's legal duties; as a result we have had public animals taking our private property, a takings we haven't been compensated for.

If you have any questions I would be glad to try and answer them. Thank you.

FOOTNOTE

NOT ONE QUESTION WAS ASKED

Statement of

Elaine Allestad Representing the

Montana Wool Growers Association
&
American Sheep Industry Association

before the

United State Senate

Subcommittee on Parks, Historic

Preservation and Recreation

May 23, 1995

My name is Elaine Allestad. My family owns and operates a sheep and cattle ranch near Big Timber, Montana. I am a Sweetgrass County Commissioner and a former Commissioner on Montana's Fish Wildlife and Parks Commission. We run on a U.S. Forest Service grazing allotment seven miles north of Yellowstone National Park, an area that has served as grizzly bear habitat and now serves as habitat for gray wolf recovery. I thank you for this opportunity to testify before the Senate Subcommittee on this most important subject, the wolf.

If it can be said the bald eagle represents the successes of the Endangered Species Act, then it can also be said that the wolf best represents the Endangered Species Act's failures and abuses. Foremost among these abuses is the fact that the gray wolf is not in danger of extinction. Canadian biologists estimate there are between 45,000 and 60,000 wolves in Canada. Over two thousand gray wolves are found within the continental United States and another 7,000-10,000 gray wolves are found in Alaska. The wolf issue is not about recovery of a threatened species. Nor is this issue about biology. The wolf issue centers around regulatory control of natural resources. The issue also centers around the misguided policies of natural regulation.

When the public thinks of wolf recovery, it typically thinks of Yellowstone National Park and northern Minnesota. However, the Yellowstone recovery plan has less to do with Yellowstone, and more to do with the majority of land base in Montana, Wyoming and Idaho. The Eastern Timber Wolf Recovery Plan not only covers Minnesota, but also Wisconsin and Michigan. This plan also calls for recovery of wolves in Maine, New Hampshire and New York. The red wolf is now found in Florida, Mississippi, North and South Carolina and Tennessee. Plans are being drafted to recover the gray wolf into Washington and the Mexican wolf in Arizona, New Mexico and Texas. The U.S. Fish & Wildlife Service (USFWS) is further evaluating wolf recovery in Colorado. Finally wolves are dispersing from Minnesota into North and South Dakota. In total, twenty one states are in some manner affected by the USFWS's wolf recovery efforts.

ASI is opposed to wolf repopulation or reintroduction if the recovery program restricts the use of private property or the utilization of public lands by the private sector. We wish to discuss with you the regulatory and predatory effects the wolf has had on the sheep industry. We will focus on the Minnesota wolf recovery plan, as it best demonstrates how other wolf recovery plans such as those for Yellowstone and Central Idaho are likely to affect our industry in the future.

LESSONS LEARNED FROM THE MINNESOTA WOLF RECOVERY PROGRAM

The Eastern timber wolf recovery program has taken an enormous toll on the livestock industry and agriculture in general in northern Minnesota. According to USDA figures, there were 12,230 farms and 91,000 sheep in the Minnesota wolf range in 1979. By 1982 the number of farms in Minnesota wolf range declined 41 percent to 7,200 farms. By 1986 sheep number in Minnesota wolf range declined 82 percent to only 16,000 sheep. This decline in sheep numbers in wolf range occurred when sheep numbers in the rest of the state increased.

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1. Livestock Losses to Wolves

Between 1977 and 1986 an average of 234 domestic animals were verified as lost to wolves in Minnesota. From 1987 to 1991 this annual average increased to 1150 domestic animals, five times the number lost during the previous period. The year 1989 was extremely bad for predation with 1,734 confirmed livestock losses. The state of Minnesota compensated livestock producers $43,644 for their losses to wolves, but by February 1990 the compensation program was broke. The federal government and organizations such as National Wildlife Federation did not provide additional funds to the compensation program and many producers had to wait until the next fiscal year to receive payment. Since 1989, wolf predation levels have remained high.

The increase in predation has occurred as wolves attempt to repopulate the brushy agricultural areas to the south of the recovery area. The impact of this predation has been particularly hard on the individual farmer. For example, Ron Blocks from Itasca County, Minnesota estimates that he's lost $50,000 in dairy and beef cattle to wolves in the ten year period between 1982 and 1992. According the USDA Animal Damage Control, a high level of wolf-livestock conflict occurs in parts of Roseau and Kittson County which are located outside the wolf recovery areas designated by the USFWS. One Roseau County turkey farmer suffered over $11,988 in damage before the wolves causing the losses could be brought under control. In fiscal year 1992, Wisconsin also began to suffer heavy wolf predation. Douglas, Washburn and Lincoln counties, lost 111 domestic animals to wolves.

In 1992 the U.S. Fish & Wildlife Service issued a report entitled "Trends and Management of Wolf/Livestock Conflict in Minnesota." In earlier reports, USFWS analysts found that livestock predation was statistically insignificant. However, heavy wolf predation losses in 1987, 1989 and 1990 forced the USFWS to modify earlier conclusions. USFWS's updated data concluded that livestock losses increased with time and distribution. The USFWS report suggested that preventative wolf control measures be taken in Minnesota. The report also states that up to 30 percent of the Minnesota wolf population will have to be taken annually to prevent increased conflict. The USFWS has not taken action on this report and is unlikely to do so considering the environmental uproar created during Alaska's wolf control efforts. Most disturbing is the report's conclusion that because factors in Minnesota are different than in the West, the West can expect even heavier livestock losses than those experienced in Minnesota.

2. Compensation Programs for Wolf Losses

The Minnesota Department of Agriculture has a compensation programs to pay farmers and ranchers for losses caused by wolves. This compensation program, however, is cumbersome, and some farmer don't take the time to use it. All suspected wolf losses must be confirmed by a Natural Resources Conservation officer and payment has been limited to $400 per head of livestock. This payment by no means covers the $1,000 value of a typical cow in today's market and, even if the compensation levels were raised, it is difficult to determine a fair value for the time and energy that ranchers invest in breeding programs to produce quality herds.

The fact that wolves can consume all edible parts of a carcass in a short manner of time is also a problem with the compensation program. If to much of the carcass has been consumed or if decay prohibits identification of cause of death, no payment will be made. Meticulous Canadian studies show that typically only 60 percent of all livestock killed by wolves can be positively identified. Thus, 40 percent of the rancher's losses to wolves are never compensated by the state of Minnesota.

3. Increased Livestock Losses by Other Predators

In addition to wolf predation, the Endangered Species Act places restriction on the sheep industry's ability to control other predators such as coyotes and bobcats. Many areas of northern Minnesota saw coyote predation on sheep increase 300 to 400 percent after the wolf was listed. No compensation programs is available for these losses.

From 1969 to 1974, registered trappers were paid $50 for every wolf, $35 for every coyote, lynx and bobcat they trapped, and $5 for every fox. The state's Directed Predator Control Program was terminated in the wolf recovery region on September 5, 1974 after the wolf was listed as endangered. Today, if predation on a farm is found to be fox, coyote or bobcat related, the livestock raiser can request the Minnesota Department of Natural Resources Conservation Offices to open his farm for predator control under the State Directed Predator Control Program. If opened, then control of these other predators can be initiated by a state certified trapper. This has made the state predator control program a reactive program rather than a preventative one, and lends itself to increased costs for controlling predators and higher livestock predation losses.

A 1982 USFWS study estimated that coyote kills were 17:1 in comparison to wolf kills. A 1993 USDA Animal Damage Control report notes, however, that this ratio may be increasing. ADC stated that "coyotes remain an important factor in alleged livestock losses in the wolf range, and the coyote population has been increasing in recent years."

The increases in coyote and fox populations are not just an economic danger to livestock producers but also a danger to the wolves themselves. A 1993 USDA Animal Damage Control report stated:

> "The current high populations of coyotes and red foxes in Minnesota may be a vector for the transmission of sarcoptic mange to the state's wolf population. During 1993, 11 wolves were captured that exhibited mange. These are the first multiple cases of mange in Minnesota wolves that wolf control personnel have observed in the 18-year history of the wolf control program. Instances of sarcoptic mange were also reported in Wisconsin wolves during 1992 and 1993."

4. Disease is an Increasing Problem in Wolves

Disease has become a more significant mortality factor to the eastern timber wolf than human mortality. Some of the diseases affecting the wolf include Canine parvovirus (CPV), Lyme

disease and heartworm. Lyme disease has been found in Minnesota and Isle Royale wolves. 1991 research shows that half the variation in Minnesota's annual pup production and one third of the variation in wolf pups production in the Superior National forest is attributable to CPV.

Lyme disease is most often transmitted by ticks. This disease causes fever and severe aches in humans and if not treated immediately will debilitate an individual for the rest of his life. The first reported case of Lyme disease in humans in the U.S. was reported in 1975. By 1991, 9,344 people carried the disease. On May 11, 1992, U.S. News and World Report reported that there had been a 1,700 percent increase in human cases of Lyme disease since 1982 and stated that "only AIDs is spreading faster." In 1992 there were 200 cases of Lyme disease per 100,000 residents in California. Lyme disease is also common now in wolf populations. From 1972-1974 none of the wolves captured in Minnesota tested positive for Lyme disease. From 1977 to 1984, 3 percent of the wolves captured in Minnesota and Wisconsin tested positive for Lyme disease. Between 1987 and 1989, 47 percent of the wolves captured tested positive for this disease. Finally in 1992, 75 percent of the wolves in Wisconsin test positive to this disease.

5. Impossibility of Delisting the Wolf as Threatened or Endangered

Another problem with the Eastern Timber Wolf Recovery Program, is the fact that it has been impossible to delist the wolf once it has reached recovery levels. Under the original wolf recovery plan, a stable population of 1,000 to 1,200 wolves was deemed as necessary to ensure the continued viability of the wolf. In April 1978, the wolf was down listed to threatened which would allow limited wolf predation work to resume. But a lawsuit initiated by environmental groups restricted the control of wolves to only those wolves actually causing the depredation. ADC notes that this lawsuit turned wolf control from a preventative program into a reactive program. In 1979 there was an estimated 1,235 wolves in Minnesota meeting recovery levels. The state of Minnesota attempted to regain management of the wolf from the federal government in 1980, but the USFWS turned down the state's request. After achieving a stable population over an eight year period the Minnesota Department of Natural Resources was granted its request to hold limited sports hunting of the wolf in 1983. A Sierra Club lawsuit, however, had this decision overturned in 1984. In 1985, the U.S. Court of Appeals upheld a lower court decision outlawing the public harvest of wolves in Minnesota and reaffirming the USFWS's responsibility for managing the species. Wolf numbers continued to increase during the late 1980s and as wolves expanded onto traditional farm lands, livestock predation losses also increased.

In 1990 the wolf population was estimated at 1,500 animals, and the state of Minnesota recommended that the USFWS consider removing the wolf from the threatened list. They also asked that wolf population management be allowed in areas where established goals had been achieved. The USFWS, however, ignored these requests and drafted a new recovery plan that not only continued to protect the wolf, but also initiated controls on access, development and big game hunting.

The 1991 plan not only called for the maintenance of 1,411-1,570 wolves in Minnesota, but also establishment of a second population which consists of 80 wolves in Wisconsin, 80-90 wolves in Michigan and 25-35 wolves on the Isle of Royale. Once a total population of 1,411-1,570 wolves is reached in the three states, this population must be maintained for five years before delisting will be considered. Estimated cost of the revised recovery plan was $13,500,000, and estimated date of recovery is 2002.

The 1991 recovery plan also calls on the USFWS to evaluate the feasibility of restoring wolves to a 2,500 square mile area in eastern Maine, a 11,300 square mile area consisting of mostly private land and the Baxter State Park in northwestern Maine and New Hampshire, and the Adirondack State Forest Preserve in New York. The plan calls for the identification of "dispersal corridors" and other possible sights for wolf re-establishment either naturally or through transplant.

The USFWS now estimates that there are 2,000 wolves in Minnesota, 70 in Wisconsin and 57 in Michigan. USFWS biologists now, however, has begun discussions about managing wolves on an ecosystem basis with 200-500 wolves in each of the Michigan and Wisconsin ecosystems. They are also discussing placing further restrictions on recreation in Voyager National Park.

6. Wolf is Being Used For Land Control Purposes

The 1991 Eastern Timber Wolf Recovery Plan encourages land-use regulations that minimize accessibility and intensive commercial development in the zones designated for recovery. It calls for NEPA analysis to evaluate the impact of private and federal projects on the wolf. It discourages the building of permanent roads, adverse development, human settlement, and the destruction, disturbance or other adverse modification of habitat that might reduce wolf populations or restrict their recovery.

The USFWS appears to have ignored a 1990 Yale University survey conducted to determine the views which residents of Michigan held about wolf recovery into their state. The majority of residents believed that environmentalist would use the wolf as an excuse to stop development, and the majority of citizens opposed taxes on development or placing limits on human settlement in the Upper Peninsula as ways of supporting the wolf. Few supported road closures and most supported the notion that valuable minerals, if discovered in the Upper Peninsula, should be developed even if it occurred in areas where wolves were located.

In the plan, the USFWS calls for the need for strong regulations. To quote the USFWS, "Because wolves have survived for so long in Minnesota despite bounties and year-around hunting and trapping, there may be a question as to why any restrictions need now be placed on the taking of the wolf." They go on to say, "Widespread industrialization, mineral exploitation, and general development could threaten much of the wolf's remaining range, making regulation increasingly significant to the populations left. Additional roads, railroads, power lines, mines and tourist facilities could further carve up much of northern Minnesota. This would disrupt the natural repopulation of depleted areas by wolves and promote higher human densities which

could compete with wolves for their wild prey."

USFWS claims that a road density greater than one road mile/square mile has a negative effect on wolf recovery and the basic breeding unit of the population. In the eastern wolf recovery program, minimizing road development and road upgrading is emphasized. The USFWS claims that low-standard woods roads have the greatest risk to wolves because they are traveled by hunters and trappers and thus recommends closure and revegetation of many of these roads so road mileage is at or below threshold levels.

The plan also calls on the USFWS to maintain or increase prey populations, especially deer, moose and beaver, through habitat improvement. In addition to habitat improvement, plans to introduce the woodland caribou into the United States from Canada are also being analyzed. The USFWS expands its authority to regulate the state of Minnesota's hunting harvest of deer, moose and beaver within the plan to ensure a sufficient surplus for the wolf and will reduce this harvest if it feels necessary. The USFWS also has increased law enforcement, especially during hunting season to ensure compliance with this top down regulation. Presently the USFWS is evaluating whether coyote season should be closed during big game season in wolf areas.

The livestock industry is faced with livestock-carcass-disposal laws, and are asked to keep their livestock in or near barns until young are produced. These last practices generally calls for additional supplemental feeding, which producers may or may not be able to afford.

7. Financial Burden on USDA Animal Damage Control and State

The Minnesota wolf recovery effort is not only a financial burden on the state of Minnesota, but a burden on the limited funds available to USDA Animal Damage Control. In 1990, ADC had a $140,000 budget to control depredating wolves in Minnesota. ADC ran out of funds before the end of their fiscal year by having to travel as much as 15,000 miles per month answering complaints and checking traps. The efforts of Congressman James Oberstar and other Congressional delegates were able to increase the Minnesota ADC program budget in fiscal year 1992, however, little or none of this funding came from the USFWS.

In regards to livestock compensation, the 1991 wolf recovery plan calls for the initiation of a $50,000 federal compensation program beginning in 1994, but thus far no funds have been committed to compensate livestock losses. Current compensation continues to be paid by the Minnesota Department of Agriculture and Minnesota taxpayers.

HISTORICAL PERSPECTIVE OF YELLOWSTONE NATIONAL PARK

Yellowstone National Park was first discovered by John Colter. When Colter told others of his discovery of the areas now known as Mammoth Hot Springs and Old Faithful, people believed the stories only to be another mountain man's tall tales. Fellow mountain men named the "mythical" place Colter's Hell. In fact, this place of geysers and hot springs had been a type of hell for John Colter. During his travels through the present day park, Colter faced near

starvation conditions due to the lack of game found in the area. Later in the 19th century others discovered Colter's Hell, but the west was quickly changing. The river once called "The Little Elk River" by the Crow Indians was now called Yellowstone, and communities such as Livingston, Bozeman and Cody were springing from the prairie. President Ulysses Grant, however, had the foresight to preserve the unique qualities of areas such as Mammoth Hot Springs from the west's development by establishing the nation's first national park in 1872.

Civilization also began pushing plains' animals such as elk, grizzly, and bison further from their natural habitat and into the high country. In 1883, hunting within Yellowstone National Park was banned to all but a small tribe of Indians living within the park's boundaries. In 1902, bison were imported from Charles Goodnight's cattle and bison herd in Kansas to expand the park's twenty-two head bison population. (This is how brucellosis most likely established itself in Yellowstone.) To protect this population from extinction and to protect other game animals who had found refuge within the park, park rangers began trapping and hunting another newcomer to the park area, the gray wolf. From 1907 to 1952, bison were run like cattle on a ranch in the Lamar Valley of Yellowstone Park. Fences were built, meadows were hayed, and bison were branded for identification. The bison herd grew to a size of 1,200 head.

Elk also did well in the park. Southern elk herds migrated to hay feeding grounds near Jackson Hole, Wyoming in the winter. Northern herds met the pressure of fall hunting during their time of migration and these herds often ended up being fed by the Park Service and local ranchers during the hard winter months. To prevent overgrazing of park resources, rangers would control elk populations by shooting elk in the backcountry of Yellowstone. This practice also served to feed bear populations and prevented human/bear conflict. The grizzly and black bear populations within the park became very dense.

In 1963, the naturalist Aldo Leopold wrote a report to Congress recommending that all present management practices within the park be stopped and that a system of managing by Natural Ecosystem Regulation be started. Under this system of regulation, there was to be no artificial feeding of bears, elk or bison, there was to be no reductions of herd populations and all things were to be allowed to regulate themselves. This policy was made official by the Park Service in 1967.

Between 1967 and 1986, bison populations grew from a size of 400-600 head to 2,100. The southern elk herd could still migrate to Jackson Hole to be fed hay during the winter months, but the original summer and winter habitat for the northern elk herd lay 75 miles downstream from Yellowstone Park. Highways, cities and farms now covered this region and the elk were effectively fenced into the park. Between 1967 and 1986, the northern elk herd swelled from a population of 5,000 head to over 18,000 head. Easy winters prevented large herd die offs, but the park's natural resources were being destroyed.

Despite the fact that the average elevation of the Yellowstone Ecosystem is 8,000 feet above sea level and the wolf seldom dens at elevations over 7,000 feet, the wolf has become the park's solution to its mismanagement by no management.

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NATURAL ECOSYSTEM REGULATION

Environmentalists have intoned the "balance of nature" theory as scripture for twenty-five years. Many environmentalists claim that predators are necessary to control populations of both small and large game species. This theory became well entrenched within the environmental community when the observations of U.S. Fish & Wildlife Service biologist David Mech were published on wolf and moose interaction on the Isle Royale from 1958-1962. Since this time, Mech and other nature biologists have come to realize that nature is never in balance, but rather it's in a natural state of constant change.

The Isle of Royale is a 200-square-mile island in Lake Superior. This isle lies eighteen miles off shore and was determined a natural laboratory for predator/prey studies involving wolves and moose. The island was a dense pine forest habitat with a few caribou until 1900, when it was logged and burned by miners to expose copper veins. Around 1915, moose found their way to the Isle and the island proved to be an ideal moose habitat of aspen, birch, grass and shrubs. In 1936, a forest fire again burned the island's regrown pine forest. As grass, shrubs and aspen trees re-vegetated the island, moose population flourished to numbers of 2,000-3,000 head.

In 1940, the Isle of Royale was declared a National Park and in 1950, wolves established themselves on the island. From 1958 to 1969 a wolf/moose study took place on the island. During this period of time a stable population of 600 moose and fourteen wolves was maintained by the island's habitat. This study set a precedent for Natural Ecosystem Regulation. In 1975, the Isle of Royale study was continued. The new study showed the moose population had grown to 1,200 head and the single wolf pack now numbered twenty with a single dominant female.

By 1980, the Isle of Royale had returned to mostly climax pine forest because no forest fires had occurred in recent years. The moose population began to starve to death and numbers quickly declined to 700. The wolf population in 1980 had quickly grown to fifty with the single pack now divided into five separate packs with five reproducing females. In 1981, both the moose and wolf populations began declining. Because the island had only a limited amount of surface area, the wolves began killing one another as one wolf pack crossed into the territory of another pack. Today only twelve wolves remain on the island, and these wolves are becoming so inbred that extinction is expected within the next 25 years. The USFWS is now considering reintroducing wolves to the island to help sustain the wolf population.

Later research on the Isle of Royale has made a point that environmentalists still refuse to see. Predators (wolves) do not control the prey (moose) populations. Rather, the prey (moose) population determines the number of predators (wolves), and the available vegetation (grasses and shrubs) determines the prey's (moose) population numbers. Regrowth of the island's pine forests replaced the plants and shrubs that moose depended upon for food. As the moose became weak with starvation, they became more susceptible to predation. Wolves then began killing unusually large numbers of adult moose and with the increased food supply the wolves had larger litters and higher pup survival rates. Once the moose population was decimated, the

wolves began to starve themselves and today face extinction on the island.

Gray wolves in Alaska have already shown their ability to reproduce at a rate of twenty percent per year when game populations are plentiful. Canadian officials have documented caribou herds that have reached points of extinction only to be saved by wolf population control. Canadian elk populations have also been decimated by uncontrolled wolf populations. Canadian research has shown in regions where there are long periods of cold and vegetation recovery is slow, there will come a point where uncontrolled wolf populations can over take a prey species populations and drive this population to levels so low that natural population recovery is impossible. Canadian wildlife researcher call this situation a "predator pit."

Canadian researchers have also come to the realization that hunting and uncontrolled wolf populations cannot co-exist. Yellowstone National Park has a climate very similar to that of many areas of Canada. With the park's policy of Natural Ecosystem Regulation and as the park reforests after a large 1988 fire, "predator pits" may eventually develop within the Yellowstone Ecosystem, should the wolf be introduced. Once this point is reached, wolves would have to find alternative sources of prey. John Gunson, supervisor of Alberta, Canada's Carnivore Research and Documentation, compares this situation to that of a plague being released on the livestock industry.

STATUS OF WOLF RE-INTRODUCTION PLANS FOR YELLOWSTONE AND SURROUNDING AREAS

The U.S. Fish and Wildlife has completed its Environmental Impact Statement, its recovery plan for Wyoming, Idaho and Montana, and has introduced wolves into the region.

There was however, another plan, generally accepted by industry, hunters, and state agencies with the Yellowstone and Idaho recovery area. In December of 1990, the Secretary of Interior at the direction of Congress appointed a ten member Wolf Management Committee charged legislatively with developing a wolf re-introduction and management plan for Yellowstone National Park and the Central Idaho Wilderness. Members of the committee included: one representative from each of the Fish & Game departments for the states of Idaho, Montana and Wyoming; one representative each from the National Park Service, the U.S. Fish & Wildlife Service, and the U.S. Forest Service; two representatives from environmental organizations; a representative from the hunting community and a representative from the livestock industry. Jim Magagna, past president of the American Sheep Industry Association, served on the committee as the livestock industry representative.

At a cost of over $300,000, the federal Wolf Management Committee deliberated and developed a wolf recovery plan for the areas of Yellowstone Park, Glacier National Park and Central Idaho. On May 15, 1991, the plan was delivered to the Secretary of Interior recommending that Congress designate Idaho, Montana and Wyoming as nonessential, experimental wolf recovery areas which is allowed under Section 7 of the Endangered Species Act. The Committee also recommended that once thirty packs were established and stabilized, the three states would be

given the power to manage wolves and impacts on livestock and big game. The plan most likely needed to be implemented legislatively.

National Wildlife Federation and Defenders of Wildlife were the two wolf committee members that voted against the Wolf Management Plan that allowed re-introduction of wolves into Yellowstone Park and Central Idaho. Defenders of Wildlife immediately began lobbying Congress to reject the plan and initiated a lawsuit in the federal courts ordering the Fish & Wildlife Service to implement one portion of the agency's 1987 plan--that portion relating to Yellowstone Park and Central Idaho.

Under heavy lobby from the environmentists, the House Appropriations Committee ignored the Wolf Committee Plan and approved $348,000 to do an Environmental Impact Statement for wolf recovery under parts of the 1987 plan. The American Sheep Industry Association, the Gem State Hunters Association and the state wildlife agencies from Montana and Wyoming were angered that the minority opinion of two organizations such as National Wildlife Federation and Defenders of Wildlife would have a majority control over the outcome of the Wolf Management Committee Plan.

While the USFWS did consider and implement portions of the Wolf Advisory Committee Plan, other important aspects of the plan including compensation and protection of property were left out. Today's Senate Subcommittee may wish to review the Wolf Advisory Committee's 1991 recommendations and analyze the possibilities of legislatively handling the Yellowstone and Idaho wolf recovery efforts. It is the fear of the sheep industry that preservationists will eventually use the court system to implement many of the provisions and restrictions of the 1991 Eastern Timber Wolf Plan in the Yellowstone region.

MEXICAN WOLF RECOVERY IN ARIZONA AND NEW MEXICO

The USFWS is presently preparing an Environmental Impact Statement proposing to reintroduce the Mexican wolf to the Blue Range area of Arizona and the White Sands Missile Range in New Mexico. Much of the funding for these reintroduction efforts is coming through grants by the National Fish & Wildlife Foundation. As of August 1994, there were 89 Mexican wolves in captivity in the U.S. and Mexico. The U.S. population originated from a single female who was originally bred back to her son. Biologists are concerned about the inbreeding coefficient on these wolves, and are considering hybridizing the Mexican wolf with its cousin the gray wolf. The U.S. Fish & Wildlife Service has already completed an EIS to allow the hybridization of the Florida panther, so hybridization of the Mexican wolf is a distinct possibility.

The original Mexican wolf recovery plan called for the establishment of at least 100 Mexican wolves in the wilds. This plan recommended an area of at least 5,000 square miles for each wolf population. The White Sand Missile Range is the largest area of federal land in the former range of the Mexican wolf and consists of 3,200 square miles.

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Industry is concerned that the Mexican wolf recovery plans as drafted, are neither biologically or ecologically feasible. Concerns with the Mexican wolf recovery plan include:
1) The size of the missile range is to small to contain the wolf population; 2) The plan ignores the effects of some 50 cougars already in the recovery area. Young lions typically disperse from the area when mature, which indicates the deer herd may not be capable of sustaining a third predator, the wolf; 3) Because the Mexican wolf population is so small, hybridization with coyotes could affect an already limited gene pool, and; 4) Predation losses on surrounding ranches could be high. Mexican records show that one 74 pound female wolf killed 110 steers and heifers in a two year period. Another wolf in Mexico killed 18 steers in one month.

The New Mexico Wool Growers have actively opposed the introduction of the wolf to the missile base. In a 1987 letter to Major General Joe Owens, the Woolgrowers stated, "We would point out to you that when the people ranching on those lands in 1942 gave them up to the United States government for military testing purposes, they did not intend for the U.S. government to use those lands for wildlife or endangered species predator research."

Finally, industry is concerned with the discussions about hybridizing the Mexican wolf with the gray wolf, but also about the fact the USFWS is moving ahead with efforts to hybridize the Florida panther with cougars brought in from Texas. A July, 1991 USFWS report entitled "Supplemental Environmental Assessment, A Proposal to Establish a Captive Breeding Population of Florida Panthers," indicates that the service may have already released Texas cougars into north Florida. These efforts to purposely hybridize not only violate the Endangered Species Act, but also violates Solicitor Office rulings on the issue. In 1981, the Solicitors Office ruled that the production of hybrids between two subspecies would not be in the interest of the Endangered Species Act after the USFWS crossed the endangered dusky seaside sparrow with a morphologically similar subspecies, the Scott's seaside sparrow. The dusky seaside sparrow under this ruling was allowed to go extinct.

HYBRIDS

As stated above, the sheep industry is opposed to the USFWS hybridizing animals currently listed as threatened and endangered. The sheep industry is also opposed to the U.S. Fish & Wildlife Service protecting hybrid animals.

Genetic analysis of 86 gray wolves from Minnesota indicate that in 1991 more than half of the wolf population has mitochondrial DNA derived from coyotes. In its 1991 Eastern Timber Wolf Recovery Plan, the USFWS stated that "because of changes in habitat, human habitation patterns and development, populations of wolves and coyotes may become increasingly disjunct. This tendency may increase chances for wolf-coyote contact and thus hybridization." The plan, however, called for management to reduce the likelihood of hybridization occurring.

The USFWS appears to be changing its attitude towards hybrid animals. At a recent wolf management hearing in Wisconsin, USFWS stated that it intends to establish regulations for dog/wolf hybrids, but not for coyote/wolf hybrid because they feel the coyote/wolf is evolution.

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This point was reaffirmed in the USFWS's denial of the sheep industry's petition to delist the red wolf. In 1990, two genetic scientists analyzed the DNA of all the red wolves the USFWS had in captivity. They also analyzed the DNA from all the red wolf pelts collected over 60 years ago. These scientists found some DNA that matched that of the gray wolf and some that matched that of the coyote. There was no distinctive red wolf DNA found. The scientists concluded that the red wolf was actually a gray wolf/coyote hybrid. In denying the sheep industry's petition to delist the red wolf, the USFWS stated "Therefore, there will be no change in emphasis or commitment for recovery of the red wolf as a top predator, whether or not this species' taxonomic position is resolved. The recovery of the red wolf is most important for reestablishing this canid's unique and evolutionary role that has been vacant for some time in ecosystems of the Southeast."

ASI believes the USFWS new positions on hybrids is a serious misdirection in need of correction. First of all, the Endangered Species Act only extends authority for the protection of species, subspecies and distinct populations of species, not for the protection of hybrids or the advancement of the theory of evolution.

Secondly, the precedent established by the agency's protection of wolf hybrids has serious ramifications on the protection of other species, especially plants. Hybridization is common in many plant species. However, hybrid plants typically die out within several generations naturally. If hybrids are provided protection under the ESA, the USFWS would be faced with the hopeless task of attempting to reverse the laws of nature to ensure their survival.

COST OF WOLF RECOVERY

The cost of wolf recovery has been great in terms of Congressional appropriations. In 1991, for example, wolf recovery received $2,428,000 in appropriations with an additional $600,000 being requested for Mexican wolf recovery. There were 600 threatened and endangered species in 1991 that received less than the $600,000 requested for Mexican wolf recovery. There were 63 species that received no funding in 1991, and 335 species that received less than $10,000. Thus far, $1.3 million has been spend on Mexican wolves with another $7.2 million in projected costs for the next 10 years.

Between 1991 and 1994, over $1 million dollars was spent studying wolf recovery in the states of Washington and Idaho. Another $50,000 spent studying wolf recovery into Colorado and $300,000 was spent managing wolves already present in Glacier National Park. Yellowstone Park recovery efforts in 1994 costed over $2.3 million with the Department of the Interior now requesting additional funding. Appropriated funds are being spent on species like the wolf and the grizzly, which are in no danger of extinction, while truly endangered species like the blackfooted ferret receive nothing in terms of USFWS funds.

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CONCLUSION

The problems discussed in this testimony are not unique to the wolf. These same abuses are also found within the recovery efforts associated with the grizzly bear, the bald eagle and the desert tortoise. The American sheep industry has learned some hard lessons about the impacts of wolves on our industry, as seen with the loss of eighty-two percent of all the sheep and lambs in northern Minnesota.

As stated in the introduction, the gray wolf is neither threatened nor endangered. Canadian biologists estimate there are between 45,000 and 60,000 wolves in Canada. Over two thousand gray wolves are found within the continental United States and another 7,000-10,000 gray wolves are found in Alaska. The wolf issue is not about recovery of a threatened species. Nor is this issue about biology. The wolf issue centers around regulatory control of natural resources. It also centers around misguide policies such as natural regulation.

Our industry's losses to wolf predation have been significant, especially since 1987. Recent losses to wolves are mainly the result of exploding Minnesota wolf populations expanding out of the recovery area and onto farm and ranch lands in central Minnesota. The sheep industry asks that Congress investigate opportunities for federal compensation programs, not just for the wolf predation losses but also grizzly bear. The burden of federally protected species should not fall on the producer or the state. Nor should the financial burden of controlling depredating wolves rest solely on the Animal Damage Control Program, but rather with the USFWS.

Our industry's losses to wolf predation are insignificant; however, in comparison to losses experienced because federal wolf regulations have prevented us from controlling other predators like the coyote, bear and bobcat. Without preventative control of these predators, the sheep industry cannot survive. In Montana, Wyoming and Idaho, the USFWS is now placing restrictions on the use of M-44s, our industries most selective and humane predator control tool. Approximately 50 percent of the foxes taken and almost 20 percent of the coyotes taken in these three states are with M-44s. The BLM is also restricting the use traps larger than #3. Without these larger traps, our ability to control predators such as bears and cougars is restricted. Coyote traps are also being prohibited in areas where wolves are denning. These restrictions on the industry's two most efficient tools comes at a time when predator losses in these three states have increase 38 percent due to environmental appeals on ADC activities.

Our industry's losses to wolves will also be insignificant compared to the restrictions the USFWS plans to place on land use. ASI asks Congress to further investigate the degree to which USFWS has closed roads, placed restriction on land development, and restricted the state's ability to manage its big game animals.

Congress needs to realize that natural regulation, as practiced by the National Park Service, is a failed policy that will not be resolved by wolf reintroduction. Natural regulation is not based on science and should not be used to manage federal assets.

Page 14.

The sheep industry feels that the current Yellowstone recovery will continue to be challenged in the courts by preservationists until they obtain the same restriction in Montana, Wyoming and Idaho as are found in the Eastern Timber Wolf Recovery Plan. The sheep industry asks Congress to investigate opportunities to preferably delist the gray wolf or, if this action is not feasible, look at legislatively implementing the 1990 Wolf Advisory Committee Plan. Almost one million head of sheep and cattle are in the immediate vicinity of the Yellowstone/Central Idaho recovery areas and are jeopardized by the current recovery efforts.

The sheep industry questions the Mexican wolf recovery plan as being drafted. This draft plan is neither biologically nor ecologically feasible.

Finally, ASI believes the USFWS new positions on hybrids is a serious misdirection in need of correction. First of all, the Endangered Species Act only extends authority for the protection of species, subspecies and distinct populations of species, not for the protection of hybrids or the advancement of the theory of evolution. Congress needs to review the U.S. Fish & Wildlife Service's emerging policies regarding hybrids and determine if this policy is within the goals Congress envisioned for the Endangered Species Act.

Abundant Wildlife Society
of North America

•12665 Hwy. 59 N. •Gillette, WY 82716 •307-682-2826

April 18, 1996

Honorable Jim Saxton, Chairman
Subcommittee on Fisheries, Wildlife, and Oceans
U.S. House of Representatives
Committee on Resources
Washington, DC 20515

Dear Mr. Saxton:

Thank you for coming to Wyoming for the hearing on Predator Control. Thanks also for allowing testimony to be submitted from the general public.

Abundant Wildlife Society of North America (AWS), unlike most other wildlife groups, understands the need for predator control. We've seen and personally experienced their impacts.

Here are our recommendations:

1. Convince the EPA to allow use of poison eggs again. We need their use immediately due to the rabies epidemic we're experiencing.

2. 10-80 is an effective poison. We need to get it registered again so we can use it where needed. As was stated in the hearing, when 10-80 was taken away, an effective alternative was promised. That never happened. So we need use of 10-80 until such time an inexpensive, effective alternative is tested and on the market.

3. Give states management control of predators. Granted, much was said about the Wyoming Game and Fish (WYG&F) "soft-peddling" the predator problem. However, the best thing the federal government can do is 1) Offer expert assistance through Animal Damage Control (ADC); 2) Get federal government out of the way so states and private individuals can address predator problems effectively.

****

Do predators cause wildlife population to decline? Do predators spread disease such as rabies, bubonic plague, etc.? Do predators kill livestock, and is such killing significant?

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These three questions are what need to be answered. And they could be answered very easily. Here's how:

1. Give full authority for predator control to state and/or a region of a state. This includes allowing any type of predator (including raptors) to be removed.

2. Give them trappers, traps, aerial hunters, poisons and any other safe, effective means of predator control.

3. Do a three or five year study with another region of the state, with no predator control implemented, used for comparison.

4. Hire some unbiased experts to implement and conduct the study. This study should not be limited to game animals and livestock, but also water fowl, song birds, etc.

We would suggest using the state of Wyoming, simply because geography would work so well. Take the northeast region of Wyoming and implement aggressive predator control. Take a comparable size area west of Big Horn Mountains to use for comparison. Do not allow any predator control except in the case of documented livestock depredation. Conduct a study and publish the results.

We can guarantee you, if the study is professionally done by unbiased experts, three of the conclusions will be:

1. Predators cause significant impacts on wildlife populations and livestock operations!

2. Incidence of disease such as rabies, bubonic plague, wildlife distemper, mange, etc. will decline dramatically!

3. Predators are <u>not</u> exterminated even under aggressive predator control!

Why hasn't such a study been done? We really don't know, but our suspicion is Federal and State wildlife agencies don't want such data.

There is no doubt, as Cindy Garrettson-Weibel testified, that state wildlife agencies have "soft-peddled" the predator problem. Your colleague, Representative Barbara Cubin, was correct when she said, "The people who should be gathering the information don't want predator control, so they're not gathering it. That's what I've gotten out this hearing."

Mrs. Cubin questioned if WYG&F's failure to keep records on predator impacts was a politically based "lack of will" to do so. We think WYG&F's "lack of will" is more philosophically based than political.

There's no doubt WYG&F would be criticized if they came out and stated

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predator control was necessary, but we've found they are philosophically opposed to predator control. And, as psychologists and psychiatrists have stated for years, "We live and die for our beliefs and nothing else."

Our universities have embraced and taught the New Age religion of Pantheism -- "all is god." Here are some tenets of this philosophy:

1. Man invariably disrupts and wreaks havoc in the environment.

2. The Natural Balance of Nature is the only way to go.

3. Nature was perfect until Man disfigured it.

4. Man must reject all of modern technology and call for a return to a simple, pastoral life free of fumes, artificial chemicals, and any noise but the chirping of birds and the croaking of frogs (Science News).

5. Animals have a right to live as much as man and therefore man has no right to eradicate or control any living creature.

The problem is: "This philosophy is bankrupt." It fails to deliver. The country of India has embraced this philosophy and its environment is horrible compared to ours.

Note this quote: "We can't understand wild places unless we understand predators. As long as we deny the fact of predation or look on it as some sort of universal evil, we can't fully appreciate the processes of energy flows that sustain natural systems or the processes of evolution that shape them." (WYOMING WILDLIFE, December 1993, pg. 22)

Here is one of many "nature is god" statements you find in WYG&F's literature. They constantly spout these "interconnectedness" and "web of life" concepts which prevents man from management which would benefit wildlife, the environment and himself.

WYG&F knows the benefits of predator control, although they won't admit it. A classic example is their Black-footed ferret recovery program. While WYG&F have claimed some success, in reality, it's been a colossal failure. Few ferrets have survived and expenses have soared. Estimated recovery costs were $3,546,000.00. Identified expenditures for years 1989 through 1991 were $4,208,000.00, an increase of 119%.(1)

There were two reasons for ferret's high mortality:

1. Predation, particularly from coyotes and badgers;

2. Disease: bubonic plague and distemper. Interestingly, predators

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spread both of these diseases.

So what did the WYG&F do? They contracted a trapper for several years to trap coyotes and badgers in ferret release areas. The trapper is good. In 1991, he caught and destroyed 54 coyotes and 60 badgers; In 1992, 66 coyotes and 63 badgers.

Why do they trap coyotes and badgers? Their answer is: "Predator control and to control the incidence of disease, such as distemper and bubonic plague." (2)

Robert Wenande gave testimony at the hearing. He mentioned watching turkeys confined in a grove of trees by a pair of golden eagles. The turkeys, needing to graze for bugs and seeds, wanted to leave the trees, but when out in the open, they are easy prey for the raptor. Thus, they starved until weakened and then were forced out in the open only to all be killed by these eagles.

That grove of trees was right behind Mr. Wenande's house and he witnessed the destruction of wild turkeys in his own back yard.

While all this was happening, what was the WYG&F saying? WYG&F news articles repeatedly stated that harsh weather in winter and cold springs were the reasons for the decline in wild game, including wild turkeys. (3)

We can tell you from personal experience: That's a lie!

Yes, harsh weather can adversely impact wild game populations. Turkeys would suffer just as much if it wasn't for ranchers. These smart old birds move into ranches during those cold winters and help themselves to the variety of food sources provided by ranchers. (4)

Northeast Wyoming has been a premier wild turkey hunting area for years. Now, thanks to abundant predators, turkeys are almost non-existent.

Much controversy of declining wild game populations, cutbacks, etc. occurred in 1993 through 1994. We watched the increase of predators and knew they were a major part of the problem.

In 1990, we counted 146 wild turkeys roosting in the big trees behind the main ranch house. By 1994, there were only 41.

Such declines were not exceptions to this region at that time, they were norms. We contacted eight ranches, well-known for wild turkey populations, in the Wyoming Black Hills and found where over 1,000 wild turkeys were regularly sighted during the winter months, the sum total of seven turkeys have been seen. Mind you, these ranches are where some of the best wild turkey hunting has been in the state of Wyoming.

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Here on our ranch, we're accustomed to seeing several broods of turkey hens with chicks each summer. But as predators increased, broods of chicks were seldom seen. In 1992, there were no chicks seen, and in 1993, only four chicks were seen.
Of course, the nature lovers would demand, "But how do you know it's coyotes that are responsible for the decline in wild turkeys?" "Aren't there other factors which might be responsible for these declines?"

We knew from our survey of ranches with wild turkey habitat that only seven wild turkeys were found on eight ranches. However, we still have 41 turkeys. Why?

The answer: Active predator control on this ranch.

There is a summer camp facility at the back of the ranch where hundreds of kids come each year to camp, hike, play games and learn about God's creation. It is our desire these kids be able to see wildlife such as deer, antelope and wild turkeys and other birds. We don't care if they see predators because: 1) Predators are extremely hard to see. Even if they are numerous, few are ever seen; 2) They often carry diseases, such as rabies, which are harmful to humans. So the camp manager traps on this ranch to keep predator numbers down in order to keep incidence of disease at a minimum and also because we want wildlife around for the kids to see.

In the fall of 1993, the camp manager trapped 22 coyotes in 60 days, plus numerous foxes. Twenty of those twenty-two coyotes were female. Thus the reason we still had some turkeys here, although the numbers were low, was because we are actively implementing predator control.

Since that time, we have implemented a year around predator control program. In the first year, we had taken 108 predators, everything from coyotes to skunks (no raptors since it's illegal to kill them), off this ranch. This winter we had between 80 and 90 wild turkeys coming into the ranch.

We can tell you from first hand experience that predator control works. The WYG&F knows it, too. I have spoken with several WYG&F game wardens and biologists and, although they don't come out and admit it directly, they leave me with the conclusion that they know there's a predator problem, but their bosses don't want them discussing it. You get the impression that "Anything but predators is the problem."

WYG&F had several meetings across the state getting public input. I attended some of those meetings and, without exception, predators were brought up as a major problem.

Of course, there's more and more public outcry as more incidence of rabies occurs. Several horses, pets and other animals have died from rabies.

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There's a great debate on rabies. Is it always in wild animals or is it brought on by stress or other factors? We don't know the answer, but we do know that incidences of rabies drop dramatically when predator numbers are kept at a low.

That was why the poison eggs were so effective. You went into town, picked up a couple of dozen eggs and placed them where predators frequently travel and the eggs took care of the over abundance of predators. When predator populations are low, reports of rabies are few.

Furthermore wild game populations thrive under predator control. Again, we know from personal experience on our ranch.

Here's some facts from the ground level. Twenty-five years ago, when preventive predator control was allowed and encouraged, we took in 20 to 25 non-resident hunters for deer or antelope or both. Today, we may allow 4 hunters at the most. Why? So many predators!

We have seen an increase in our deer and antelope populations due to our predator control. About 5 years ago, some executives of Ford Motor Company and Sturm Ruger Arms needed a place to hunt and were willing to pay $1,500 for a 4-point or better buck. We hadn't taken in any hunters and each $1,500 would be donated to the church camp, so we took in these hunters. The results of their hunts? Nothing! We couldn't fill any of them. There simply wasn't any big buck deer on this entire 4,000 acre ranch.

Now, years later, we now see 5 to 6 of these big bucks in one bunch -- thanks to predator control.

One final point. Mr. Saxton, you stated predator control is an area where there needs to be more cooperation between federal and state agencies. We disagree. What's needed is: Get the Federal Government out of states' business!

How in the world do you think you can solve a problem in Wyoming when you represent New Jersey? And the reverse is true. How in the world can I solve a problem in New Jersey when I was born and raised in Wyoming?

The federal government has usurped authority from states and individuals for years and it's time to reverse that trend.

The Constitution of the United States does not allow the federal government to own lands, except for defense purposes. That means lands under control of the U.S. Fish and Wildlife, U.S. Forest Service, U.S. Bureau of Land Management, U.S. Bureau of Reclamation and any other federal agency are unconstitutionally held. It was never the intention of our Founding Fathers that the federal government should own land. Because land ownership constitutes control of the land. Federal

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control of the land is Socialism and Communism, plain and simple.

The best thing the federal government can do is its rightful job, which is extremely limited by the U.S. Constitution, and then leave the states alone.

Please include the enclosed brochure, newsletter and photos in the Congressional Record.

Thank you.

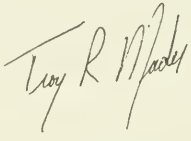
1. Gordon, Robert and Streeter, Jim; "Going Broke? Costs of the Endangered Species Act as revealed in Endangered Species Recovery Plans," published by National Wilderness Institute, 25766 Georgetown Station, Washington, DC 10007. Phone (703) 836-7404.

2. Personal phone call with WYG&F personnel. We also have a letter on file in which the WYG&F documents the numbers of predators taken, but denies their activities are "predator control."

3. "Hunters Face Cutbacks in Northeast Wyoming" NEWS RECORD, 3/11/94, page 1.

4. Ranchers feed livestock in winter. Hay, cake and assorted grains are utilized. Such feeding allows for a food source for wild game by spillage, natural utilization and discharge from livestock.

This testimony submitted by T. R. Mader, Research Director of Abundant Wildlife Society on North America.



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Reasons Why YOU Should Join Abundant Wildlife Society

1. ABUNDANT WILDLIFE SOCIETY supports Conservation – the management of wildlife by man instead of Environmentalism – the cyclic "balance of nature" also known as feast and famine.
2. ABUNDANT WILDLIFE SOCIETY supports hunting, fishing, trapping and multiple use with sound conservation management.
3. ABUNDANT WILDLIFE SOCIETY supports reasonable predator control. We *DO NOT* advocate the extinction of any species. Predators are known disease carriers and will decimate wildlife populations if left uncontrolled.
4. ABUNDANT WILDLIFE SOCIETY is for land use and against land lock-up. Logging, Grazing, Mining and Multiple Use of public lands are good and necessary.
5. ABUNDANT WILDLIFE SOCIETY believes private property rights and ownership are the only basis to REAL FREEDOM. Central government control is detrimental to wildlife, environment and the economy.
6. Most environmental groups, with no regard for truth, use misinformation to further their agendas and are anti-God, anti-American and anti-gun (in the hands of law-abiding citizens). ABUNDANT WILDLIFE SOCIETY believes America is the greatest nation on earth, that its greatness is due to its Christian heritage, and that guns in the hands of law-abiding citizens are the best means of restraint against the tyranny of government.

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What Everyone Who Enjoys Wildlife Should Know

Wildlife are in trouble today. Big game, game birds and even song birds are becoming more and more scarce. There is a **CRISIS!**

It's not loss of habitat. Most wild animals adjust well to man and his surroundings. In fact, many changes in the environment by man have helped wildlife. For example, when man settled the west, the land was often semiarid. Irrigation and reservoirs allow wildlife to flourish where few could previously survive.

Hunting is not the problem either. Songbirds which are not hunted are scarce. Many areas with no hunting have few animals to see and enjoy.

On the other hand, due to ability to control numbers of licenses, length of season and sex of animal taken, hunting has proven to be the best method for the control of game animals and birds. It keeps them abundant and yet controls them from excessive crop damage or habitat destruction.

Did you know hunting has been reduced in almost every area of North America? Yet wild game and birds are not to be seen or found in many areas. So what's the problem?

The problem is **PREDATION.** In recent years, predators have increased unchecked due to several reasons and the result is destruction of multitudes of wild game and birds.

Why have predators increased?

Popularity given the predator by groups who have promoted them extensively is one reason. For example, enormous parts of Washington and Oregon are being set aside as habitat for the Spotted Owl. This bird is a predator on small animals and birds.

Protection given the predator has increased its numbers. Northern Minnesota has always had wolves. The wolves were kept under control by trapping and hunting. The deer population was abundant and northern Minnesota was known for good hunting and viewing of wildlife. In 1973, wolves were federally protected. Now the deer population is only a small percentage of what it used to be.

Price of furs have plummeted. Thus few people can afford to trap with so little return. This is due to negative publicity and activities of animal rights groups. People, who used to regard fur as a status symbol, are now being persuaded that the taking of a predator for its fur is wrong.

Trapping is now under fire by many groups. It is the intent of these groups to completely outlaw trapping. If this happens, predators will increase at an even greater rate. Wildlife will simply disappear in many areas.

Continued on page 5

14 pt. buck dragged down by 1 timberwolf. Six men on a logging crew witnessed the attack. The deer was attacked 3 times and was literally eaten alive (15-20 lbs. flesh torn from hams). The buck was examined internally and found to be healthy. Photo-Carl Brown.

WOLF PREDATION ON SHEEP IN ALASKA

Several of the kills were accomplished by severing the wind pipes and jugular veins without other damage.

3

These pictures were taken by an Alaska Fish and Game Department biologist following a kill by 5 wolves of 20 healthy rams on November 9, 1988.

LOCATION: Wrangell St. Elias National Park/Preserve in Game Management Unit 11 between the Dadina and Chestasline Rivers.

NUMBER OF DEAD RAMS: 20
12 rams - little or no use by wolves
6 rams - 40 to 90% consumed by wolves
2 rams - No estimate of consumption. Checked too late-damaged by ravens.

BONE MARROW: All samples checked showed high fat levels. Animals not nutritionally stressed. All animals checked appeared in good physical condition with no defects making them susceptible to predation.

SHEEP AGES: 2-9 years old
SNOW DEPTH: 14"-29"

4

of 21 deer killed by two wolves in two days in Minnesota. oto courtesy Wm. Callies, Conservation Officer (Retired), innesota Department of Natural Resources.

Predation is very hard on wildlife. Dr. Lester cCann, Ph.D. has studied predation and ildlife for many years. He has found many in- resting facts about predation.

1. Predators are the main carriers of deadly diseases of wildlife. Wolves and coyotes are well known to carry rabies which kills every animal infected with this disease. [Note: Rabid animals have often attacked humans. A rabid wolf was particularly dangerous due to its size and strength.] Raccoons carry a deadly fowl cholera which have devastated ducks in many areas.
2. Predation is non-specific — meaning the predator takes what it finds. Fox, skunk and raccoon are extremely hard on ducks, pheasants and other birds due to their nest destruction. Many studies have shown no young reproduced from nests due to predation.
3. There have been no significant increases in wildlife populations without some kind of predator control program.

eer fawn killed by wolves on Vancouver Island, British olombia. Photo Courtesy D. Janz, Biologist.

Common Man Institute has researched wolves extensively for several years. Here are some findings about predators from this research:

1. Surplus killing is common. This is especially true in the case of harsh weather. Animals, which are unable to get enough forage or have to endure cold temperatures for long periods of time, become weakened. This makes them very susceptible to predation and mass killing occurs.
2. Wolves and coyotes are extremely hard on the young, the replacement segment of a wildlife population. Wolves destroyed 95% of the deer population on Vancouver Island in British Colombia in recent years. Studies revealed that wolves kept the deer at their low numbers by killing off most of the young.

PREDATION MUST BE ADDRESSED FOR WILDLIFE TO BE ABUNDANT FOR VIEWING OR HUNTING. THE PREDATOR IS TO WILDLIFE WHAT WEEDS ARE TO THE FARMER AND THE GARDENER. YOU CAN'T HAVE ABUNDANT WILDLIFE WITH ABUNDANT PREDATORS ANY MORE THAN YOU CAN HAVE AN ABUNDANT GARDEN OR CROPS WITH ABUNDANT WEEDS!

Wm. R. Taliaferro
106 Cedar St.
Rock Springs, WY 82901
April 15, 1996

United States House of Representatives
Committee on Resources
Sub-Committee on Fisheries, Wildlife and Oceans

Dear Members of Congress,

I was unable to attend your hearing in Gillette Wyoming last week so I am submitting the following documents. These documents will give you an idea of the tremendous damage we are suffering at the hands of predators, most which belong to the State of Wyoming and some Federally protected birds. So far we have been unable to get either the Wyoming Fish and Game Department or the Federal Fish and Wildlife Service to come and relieve us of the burden placed on our livestock by the animals they are supposed to manage.

We feel a monumental "takings of private property" is occurring and we are at our wits end trying to get government officials, who have all taken an oath to uphold and protect the Constitution of the United States and the Constitution of the State of Wyoming, to validate or uphold our rights as so provided for.

I don't know what you can do, but if governments are allowed to usurp our property with out compensation, via wild animals they wish to protect; or further just ignore their responsibilities to the public, Americans in general are in deep trouble. The House of Representative has generally been the people's house. Please help us find a solution to our problems and do what you can to convince governmental officials that governments under our Constitution has a responsibility to the individual as well as the masses.

Thank you,

Wm. R. Taliaferro

Green River and Big Sandy Livestock Co's.
106 Cedar St.
Rock Springs, WY 82901
Jan. 30, 1996

Wyoming Game and Fish Commission
5400 Bishop Ave.
Cheyenne, WY 82005-0001

Dear Commissioners;

We lost twenty one (21) ewes to coyote depredation from December 1, 1995 through January 30, 1995. These ewes are worth $90.00 each and were killed on winter ranges where we previously asked the Department to "remove their coyotes from". We are again submitting a damage claim for an additional $1890.00 to compensate us for our losses derived from Game and Fish Departmental neglect in enforcing Wyoming Statutes governing your agency.

I would again ask the Department to remove coyotes from the lands we previously identified and submitted to your department. We would also like sheep predators removed from the grazing pastures we will be using during the balance of the winter, our lambing ranges east of Kemmerer and our summer allotments on the Bridger-Teton National Forest.

I have asked for and never received the name of a person within the Department whom I should call so they could verify our damages. I would still appreciate you specifying someone for that duty. We now have radios in each camp which are connected to a phone patch. Each morning this person could call us at 307/362-3433 and we could tell them exactly how and where to find predator killed livestock when they occur, or if we had his or her telephone number we would be willing to call in when we have damages.

I don't know what else we can do to be cooperative. Again, I'm only asking that you please follow the law and do your duty as prescribed within Wyoming State Statutes. Thank you.

Sincerely,

Wm. R. Taliaferro Sec/

cc: Calvin Ragsdale

WYOMING
GAME AND FISH DEPARTMENT

Jim Geringer, Governor — Joe White, Acting Director

This is typical of all correspondence with the Dept. Nobody wants to accept responsibility for damage predators do.

February 16, 1996

Mr. William R. Taliaferro
Green River and Big Sandy Livestock Co's.
106 Cedar St.
Rock Springs, WY 82901

Dear Mr. Taliaferro: -

I am in receipt of your letter to the Wyoming Game and Fish Commission requesting damages in the amount of $1890.00 to compensate you for sheep losses by coyotes. All claims for damage compensation are governed by W.S. 23-1-901 and Wyoming Game and Fish Commission Regulation, Chapter XXVIII.

Statute 23-1-901 authorizes the department to consider damage claims by big or trophy game animals or game birds only. Your letter states you "...lost twenty one (21) ewes to coyote depredation...". W.S. 23-1-101 defines a coyote as a predatory animal; therefore, the Department cannot accept your damage claim request.

The Department must deny your request to remove coyotes from your land as the Wyoming Game and Fish Department accepts no liability for damage caused by any animal classified as a predator by W.S. 23-1-101(viii) or any federally protected bird such as eagles, hawks or owls.

If you suspect damage to your livestock by big or trophy game animals or game birds, you should first contact Game Warden Tom Schirm at (307)877-3278 and if unable to reach Tom, call Regional Wildlife Supervisor Scott Talbott at (307)875-3223. However, our personnel do not investigate damage by animals classified other than big or trophy game or game birds.

Sincerely,

Jay Lawson
Chief, Wildlife Division

JL/bp
Enclosure
cc: Joe White
Tom Schirm
Scott Talbott

Headquarters: 5400 Bishop Boulevard, Cheyenne, WY 82006-0001
FAX (307) 777-4610

Green River Livestock Co.
Wm. R. Taliaferro Sec.
106 Cedar St.
Rock Springs, WY 82901
April 11, 1995

Wyoming Game and Fish Commission
% Wyoming Game and Fish Department
5400 Bishop Ave.
Cheyenne, WY 82006-0001

Dear Commissioners:

This letter is in regards to the predator situation in Southwestern Wyoming. We have lost tens of thousands of ewes and lambs over the history of this ranch (since 1909), but during the past few years we have seen our losses increase to unprecedented and unbearable highs. Anymore, we can't even raise domestic ducks, chickens or geese on our farms and ranches because of predators (skunks, raccoons, eagles, ravens, fox and coyotes) and this winter, besides losing about 100 ewes to coyotes, they killed all of our geese at our ranch.

For years now, we have suffered from the effects of predators. We have asked the Wyoming Game and Fish Department for help; not only for ourselves but for resident birds and game animals as well, however, we have been generally ignored. We have watched the Wyoming Game and Fish Department through their personnel oppose predator control, author and support rules and legislation which greatly diminished effective and efficient predator control methods and manage game animals in such a manner that a retired game and fish biologist commented in 1994 **"that if the Governor really wanted to do Wyoming a favor, he would put the present Game and Fish Department in charge of raising mosquitoes. In five years we wouldn't have any!"** Because of predators our ranches are unprofitable, game and bird populations are down and most everyone is unhappy with the situation.

May I suggest the Commission review the comments of Mr. Joe White concerning Animal Damage Control on the four BLM Districts within Wyoming. Please review the comments of Mr. Harry Harju over the past several years. Review and tell me how anyone can support the logic found in "A WHITE PAPER ON WILDLIFE RELATED PREDATOR CONTROL" prepared by Dan Thiele, Biological Services, Wyo. G&F, Nov. 17, 1989; look at the Departments big game populations and trends over the years and see if there isn't a correlation between population declines and hunter success and the end of old time predator control in 1972. If I am wrong please explain the tenor of their comments, conclusions of their documents, and how "habitat" is the only problem when livestock numbers have been declining for fifty years. Even the public is finally catching on and are "mad as hell" and you as commissioners must realize this with the hostility displayed at commission meetings and the public hearings held around the state the past

two years. Wyoming Game and Fish is really disliked and is fraught with real problems. This is unfortunate because in the past, (20 years ago), the Department was pretty well thought of throughout this area.

Anyway, enough is enough. I have reviewed (with legal council) the statutes which govern and allow the Commission and the Department to operate and believe both the Commission and Department have ignored and been derelict in their duties and responsibilities in regards to predators and the damage caused by them. My basis is the following: (the bold type is mine)

(1) 23-1-101. Definitions of Wildlife.
(a) As used in this Act:
(xiii) "Wildlife" means **all wild mammals**, birds, fish, amphibians, reptiles, crustaceans and mollusks, wild bison designated by the Wyoming Game and Fish Commission and Wyoming Livestock Board, within Wyoming.

(2) Ownership of wildlife:
Purpose of act.
For the purpose of this act, **all wildlife in Wyoming is the property of the state.** It is the purpose of the act and the policy of the state to provide and adequate and flexible system for the control, propagation, management, protection and regulation of all Wyoming wildlife. There shall be no private ownership of live animals classified in this act a big or trophy game animals.

(3) Article 3 - General Powers and Duties of the Commission:
23-1-302 (a) (viii)
To authorize the chief game warden or his designee to kill **any wildlife** in Wyoming when in the judgment of the commission the killing is necessary **or when the animals or birds are doing substantial damage to property....**
23-1-302 (a) (xix)
To designate as protected, game, or predatory, any species not designated in Section 23-1-1 (23-1-101) of the statutes, and **to establish rules and regulations necessary for control of the species so designated.** The designation may apply to portion of or the entire state.
23-1-302 (a) (xxii)
To promulgate such rules as the commission considers necessary to carry out the intent of this act.

We can no longer stand the economic losses incurred by predators and since the Game and Fish Department has definitely helped neuter our ability (ranchers, county predator boards, and USDA animal damage control) to control animals harassing and killing our

animals; I am asking the Commission to direct the Department to follow the mandates of state statute.

Please have the Department remove the offending animals causing damage to our private property within Western Wyoming and please remove all skunks, raccoons, ravens, golden eagles, red fox and coyotes from out private lands and prevent their further trespass upon our holdings.

I am forwarding this letter to the various County Commissions within Western Wyoming and am asking them to declare the above species as "nuisance animals" as provided for under Wyoming Statutes 11-31-301, in the eventuality that the Game and Fish Department does not carry out its mandate under the statutes. I would also ask Game and Fish (as the owner) to follow the mandates of statute 35-10-104 regarding the removal and burying of dead animals. This shouldn't be left to the counties and cities of the area.

Thank you for any help that might be forthcoming..

Sincerely,

Wm. R. Taliaferro Sec.
Green River Livestock Co.

ps: The trespass provisions we have put in place upon Wyoming Game and Fish Personnel concerning our private lands will be lifted while predator removal is ongoing and if relationships should improved these provisions could be lifted altogether. The following is a list of our private lands.

cc: Governor Jim Geringer
Jim Magagna
Ron Micheli
Rock Springs Grazing Assoc.
Uinta Development Corp.
"Carter Lease"
Ranchers in western Wyoming

wm. K. Taliaferro Sec.
Green River and Big Sandy Livestock Co's.
106 Cedar St.
Rock Springs, WY 82901
July 7, 1995

Wyoming Game and Fish Commission
% Wyoming Game and Fish Department
5400 Bishop Avenue
Cheyenne, WY 82005-0001

Dear Commissioners.

You may recall my letter of April 11, 1995 requesting your help in directing the Game and Fish Department to remove various predators from our private lands and to prevent further killing of our livestock by these public animals.

During May while our sheep were having lambs we started experiencing heavy lamb losses from predators. I contacted Mr. Ron Lockwood of the WG&F Department about May 20th. concerning our losses, and a few days later met with Mr. John Talbot the Department's District Manager concerning the same subject and informed him at that time we would seek reimbursement for our losses caused by the Department's animals.

I was hoping WG&F personnel would be able to meet with our sheepherders each morning to document the losses, however, the only time anyone was available was when we were missing lambs and mountain lion tracks were seen in the snow moving back and forth from a small group of ewes and lambs where 10 lambs vanished over a period of about 6 days. (Steve Moyeles of Green River USDA-ADC, and Jesus Garcia a sheepherder saw the tracks)

The following is the losses reported by the following sheepherders.

		Coyote	Eagle	Raven	Mt.Lion	
5/11/95 - 6/11/95	Ismael Gamez	6	4			
" - "	Juan Hernandez		1			
" - 6/13/95	Lus Morales	40	3			
" - 6/30/95	Victor Morales	50	6			
" - 6/18/95	Lupe Hernandez	15 lamb	3			
		14 ewe				
" - 6/30/95	Jesus Garcia	35	5		10	
" - "	Julio Carmona	36	3			
" - 6/10/95	Felix DeLeon	19	5			
" - "	Martine Martinez	24		10		
" - "	Primotivo Ibarra	8		6		
TOTALS		247	30	16	10	= 303

We have sold our lambs for fall delivery at 77 cents per pound and our lambs generally average 85 pounds in weight at delivery. This is a $19,831.35 loss to our company. We are asking the Wyoming Game and Fish

Department to compensate us for this amount through June 30, 1995. (If you wish to delay payment until after we ship our lambs to see what the actual average weight of these lambs are we would be agreeable to settle at that time.)

We will be going to the forest about July 20th. and if history is any reflection of the future I would expect to have about another 150 - 200 sheep killed by coyotes and bear. Our company will submit another damage report at the end of September. We would like your personnel to be on hand throughout the balance of the summer to verify the losses if possible. Thank you.

Sincerely,

Wm. R. Taliaferro Sec.

ps: Inclosed is a list of our deeded lands. We also lease about 5000 acres of State School lands and lease grazing rights on about 11,600 acres of Union Pacific checkerboard lands in the Slate Creek BLM Administrative Unit. Our losses occurred mostly within the Slate Creek Allotment west of the Graham Ranch on Emigrant Creek, Slate Creek, Middle Fork of of Slate Creek, South Fork of Slate Creek, at Craven Creek Reservoir, the head of Alkali Creek and on Willow Creek in the Pomroy Allotment.

We lost 15 lambs and 14 ewes on the Big Sandy Allotment east of Highway 28 and west of the Big Sandy River near the mouth of Simpson's Hollow.

Public access to our lands is allowed, no fee is charge and no game coupons have been redeemed even though hunters always leave some with us. The only restriction on access has been with Game and Fish personnel due to the attitude and writings of Mr. Phil Riddle and Mr. Jim Vilos of Kemmerer.

Wm. R. Taliaferro
106 Cedar St.
Rock Springs, WY 82901
July 19, 1995

Wyoming Game and Fish Commission
Wyoming Department of Game and Fish
% 5400 Bishop Ave.
Cheyenne, WY 82005-0001

Dear Commissioners and Staff:

I am writing in regards to your meeting held in Greybull on July 10, 1995. I was quite upset after driving over 600 miles, expending money for a nights lodging, only to find the announced "predator policy" of the Commission hadn't even been written, adopted in a draft stage, or ready for public comment. It was also evident the meeting agenda was so large that only lip service could have been given to most items during the day and a half meeting. It was very unfair to the public and commissioners who made the effort to be in Greybull, and it is evident there is something wrong between the staff and the commission as to who is in charge and what everyone's responsibility is.

Being that as it may, back to the "predator policy". What I heard being attempted was something so nebulous as to be useless. I would suggest the Commission and staff review the laws and statutes each are authorized under and develop policy from what our elected officials have directed the department and Commission to do. Quit trying to dodge the responsibilities you have been given and do the job mandated by the statutes.

If you feel the statutes need changing, then fine, attempt to have them changed by the legislature. However, until then we expect the Commission and the department to adhere to the letter of the law. (In fact we heard time and time again during the Greybull meeting how the staff had to followed their legislative mandate, even when it was burdensome.)

As my most recent letter to the commission indicates, we have received "subatantial damage" from wildlife to our sheep and lambs. We reported to your District Supervisor that damage was occurring, we have offered the time of our men to show Game and Fish personnel where the killing has occurred so as Game and Fish could confirm for themselves and Mr. White what is happening. So far we haven't had any response (except with Mt. Lion) and haven't even received a letter or acknowledgement from the Commission in regards to my first letter of April 11, 1995.

I am again requesting the animals I mentioned in my letter of April 11, 1995 be removed from our private lands. I am again requesting that the Game and Fish prevent our receiving further "substantial damage" from wildlife. I am offering the services and time of our men to show Game and Fish what is happening to our property while grazing upon lands we use in Western Wyoming, and if the Department can't fulfill what is mandated by statute then I expect to be paid for those damages caused by the animals they should have controlled or removed.

Please let me know what I can expect.

Sincerely,

Wm. R. Taliaferro

Green River Livestock Co.
Big Sandy Livestock Co.
106 Cedar St.
Rock Springs, WY 82901
Aug. 14, 1995

Wyo. Game and Fish Commission
Wyo. Game and Fish Director
Mr. John Talbott
5400 Bishop Ave.
Cheyenne WY 82006-0001

Dear John,

I received your letter of Aug. 8, 1995 and I am sorry if my previous correspondence has confused the Department with our damage claims. I fully understand the procedure for trophy game animals, however, our claim was submitted because the Department failed to remove or kill animals or birds which have and continue to substantially damage our property.

The statutes give your Department all the wild animals and the responsibility for those animals. I have simply asked to be relieved of the damage they cause. I have offered to be of service to the Department so the level of damage could be verified if the Department so wished and have expected the Department to fulfill the mandates of Wyoming Law.

Our damage claim is based solely on your agency's failure to follow the law and provide us relief from property damage caused by your animals.

I hope this explanation simplifies and makes quite clear our claim.

Sincerely;

Wm. R. Taliaferro Sec.

ps: If there is still confusion concerning this subject I would suggest you talk with Commissioner Les Henderson, I believe he understands our concerns.

Copies of this and all previous correspondence:
Calvin Ragsdale - Attorney at Law
Wyo. Woolgrowers Association
and any other interested persons

Wm. R. Taliaferro Sec.
Green River and Big Sandy Livestock Co's.
106 Cedar St.
Rock Springs, WY 82901
October 18, 1995

Wyoming Game and Fish Commission
c/o Wyoming Game and Fish Department
5400 Bishop Avenue
Cheyenne, WY 82005-0001

Dear Commissioners,

In my letter of July 7, 1995 I told the Commission we would submit another report of predator damage upon our livestock during the period of July 1, 1995 through September 30, 1995. I was hoping the Department would remove the problem predators around our sheep but nothing was ever done. Game and Fish personnel never came to inspect damages or inquire about damage.

From July 1, 1995 through September 30, 1995 we lost the following:

Bridger-Teton National Forest
Dry Beaver Allotment - 27 coyote (herder Primotivo Ibarra).
Mule Creek Allotment - 5 coyote (herder Juan Hernandez).
Corral Creek Allotment - 10 coyote (herder Lus Morales).
Grizzly Creek Allotment - 9 coyote (herder Jesus Garcia).

BLM
Big Sandy Allotment - 84 coyote (herder Lupe Hernandez).

Total observed killed by coyotes 135 head of sheep and lambs.

We had 303 lambs killed by wildlife in May and June, 125 lambs killed by coyotes during July, August and September and 10 ewes killed by coyotes during July, August and September. This is a total of 438 head. Our lambs average weight was 93.5 lbs., and we sold them this fall for 77 cents per pound. Our loss to wildlife killing our livestock this summer amounts to $31,533.81 and if we assume we might have a natural 3% loss if those lambs and ewes were left alive our loss due to wildlife is $30,587.80 dollars.

We wish to submit the above amount to the Commission as our damage claim.

We will be moving to the Rock Springs Allotment in early November to lands we own near and around Green River Wyoming. I would again request that Department personnel please remove coyotes from our lands and the lands we use adjacent to those we own. We will always be available for Game and Fish personnel to come to the camps and inspect damage that will certainly be occurring unless the coyotes are removed. Hopefully I won't have to submit another damage claim after the years end.

Thank you for your considerations.

Sincerely,

Wm. R. Taliaferro

Green River & Big Sandy Livestock Companies
106 Cedar St.
Rock Springs, WY 82901
Wm. R. Taliaferro Sec.
Nov. 9, 1995

Wyoming Game and Fish Commission and
Mr. John Talbot - Director
5400 Bishop Ave.
Cheyenne, WY 82005-0001

Dear Commissioners and Mr. Talbot,

I am again asking for the Commission and Department to remove coyotes, red fox, eagles and ravens from our private lands in western Wyoming. I am also requesting the Department to remove animals that might, have and most certainly will, be killing our private property upon the winter ranges we utilize.

Since the Commission met in Rock Springs in October, we have lost 3 goats to coyote depredation. We can now expect more losses since we are moving into an area that has had very little predator control during the past six months and if I am right (and I hope I'm wrong) I will need to know who I should contact within the Department as damages occur, so damages may be verified.

Please let me know as soon as possible. Thank you.

Sincerely,

Wm. R. Taliaferro

BIODIVERSITY ASSOCIATES
and **FRIENDS OF THE BOW**
P.O. Box 6032, Laramie, WY 82070
(307) 742-7978 (voice) 742-7989 (fax)

May 20, 1996

Representative Jim Saxton,
U.S. House Subcommittee on Fisheries, Wildlife, and Oceans
Washington, DC 20515

Dear Representative Saxton:

Thank you for your May 9, 1996 letter. Below please find the responses to Representative Cubin's questions regarding the issue of predator control in Wyoming.

Question #1 on assumptions about sheep deaths: I was referring to the Tigner and Larsen study in the context of the unreliability of rancher-reported sheep losses.

The study referred to missing sheep as "a perplexing source of [sheep] loss that is often *blamed* on predators." Tigner and Larsen at 250, emphasis supplied. The study reported "high numbers of missing sheep." It found that some animals "were not lost but traveled off the summer range." The study pointed to the "importance of a competent herder" in keeping track of animals, and it cited high losses in the summer of 1975 which "also reflected a labor problem." Id. In a 1991 interview, biologist Tigner was quoted as saying, "There's no doubt that there are more reported losses than are actually caused by predators." High Country News, Vol. 23 No. 1, Jan. 28, 1991.

It is reasonable to assume that the 100 lost sheep referenced on page 250 would have died due to the same proportion of causes found with confirmed losses. Those sheep and lambs lost at the end of the season when the weather changed would have been especially vulnerable to exposure and starvation. The Tigner study listed at least 7 other causes of sheep mortality not related to predators, including approximately 30% from disease, 30% from exposure, 20% from starvation, and up to 10% from accidents. Taken together, these losses far exceed depredation losses.

Question # 2-a on compensatory reproduction: Young coyotes are more aggressive (we've heard it said, "old coyotes are a rancher's best friend"). A number of researchers have concluded it would be better to stop using lethal methods to kill coyotes and allow populations to mature. There are a number of reasons why lethal methods exacerbate depredation. One is changes in population dynamics such as compensatory reproduction (see below). Another involves behavioral changes regarding prey species (evidence coyote aversion to dead carcasses laced with poisons has increased a preference for live animals).

• Maurice Hornocker, predator researcher and member of the 1971 Dept. of Interior oversight committee which led President Richard Nixon to ban the use of 1080:

"Coyotes in North America have been hunted, exploited and killed since European times. Its all been a waste of money and animals. In many cases, the best control is no control at all. They will limit their own numbers if you leave them alone." High Country News, Vol. 23 No. 1, Jan. 28, 1991.

• Biologist Robert Crabtree studying unexploited coyote populations both in the Hanford Nuclear Reservation in Washington and in Yellowstone National Park: He concluded coyotes with stable populations produce small litters of roughly 3 pups each, of which an average of 1.6 survive. In areas subject to predator control, however, litters of 8 pups are common, while dens with 9 or even 10 pups are not unusual. Those in exploited areas (i.e., where lethal methods are used) also begin breeding at less than a year old and continue for several years, while the mostly unexploited coyote populations of Yellowstone do not breed until they are 2-4 years old and stop reproducing after about 3 litters. High Country News, Vol. 23 No. 1, Jan. 28, 1991.

In an interview reported last year, Crabtree commented that lethal methods increase the production of pups which leads to more predation. 'Killing adult coyotes," Crabtree said, "just doesn't work. It's been shown that coyote populations can withstand up to about a 70 per cent removal annually and still have the same number of coyotes there every year." Casper Star Tribune, Aug. 17, 1995

• Member of an ADC Advisory Committee and Eastern Montana College biology professor, Jay Kirkpatrick: "It's a proven fact: the faster you reduce coyote populations, the better and faster they reproduce." High Country News, Vol. 23 No. 1, Jan. 28, 1991.

• U.S. Fish and Wildlife biologist, James Till, who conducted the study with Knowlton on the effect of denning in reducing coyote depredations in the early 1980's in Wyoming: "I've always felt that a lot of sheep predation by coyotes is a learned behavior. Coyote pups raised on sheep probably do prefer sheep. In areas where there is a lot of natural prey, they won't." High Country News, 1991 and Till J. A. and F.F. Knowlton. 1983. Efficacy of Denning in Alleviating Coyote Depredations Upon Domestic Sheep. In: J. Wildl. Manage. 47(4): 1018-1025.

Question # 2-b on whether or not lethal methods provide a solution: There is no contradiction. Extensive lethal predator control has *not* provided a long-term solution to livestock depredation. The key concept here is "long-term" solution.

• In his book, researcher F. Wagner reported, "the data available point to little or no reduction [in depredation as a result of] lethal, preventative efforts that attempt region-wide population suppression." Wagner, F., 1988. Predator Control and the Sheep Industry: The Role of Science in Policy Formation.

• The Wyoming Game and Fish Department reported: "Predator control in Wyoming in recent years has been primarily restricted to agricultural depredations....These programs have not been shown to benefit wildlife; benefits are just assumed. Wildlife related predator control would require removing most predators in a given area. This is not likely to be cost effective." Wyoming Game and Fish, 1989. A White Paper on Wildlife Related Predator Control.

• The Wyoming Game and Fish paper cited another study done on mule deer in Colorado which showed that even with the removal of all coyotes, fawn survival increased only 10% from 30% to 40%. It concluded that "predator control can be effective on a case by case basis when cost is only a minor consideration" but that overall "predator control to benefit wildlife is generally not cost effective." Id.

• The Cain Report concluded that lethal predator control was not cost effective and was a waste of money and effort. See,"Report to the Council on Environmental Quality and the Department of the Interior" by the Advisory Committee on Predator Control, U. of Michigan, 1971.

The sheep industry and ADC have put forth some arguments that lethal predator control can provide a short-term solution where all adults and/or pups in a region are killed. The Till and Knowlton study in south-central Wyoming cited in our original testimony found that killing all pups reduced sheep depredation by about 90% even though adult coyotes were still active in the area. (See Till J. A. and F.F. Knowlton. 1983. Efficacy of Denning in Alleviating Coyote Depredations Upon Domestic Sheep. In: J. Wildl. Manage. 47(4): 1018-1025. But as we pointed out earlier, this level of control -- complete coyote eradication -- cannot be achieved without exorbitant cost, and as such is not an economically feasible solution to livestock depredation.

More importantly, the public is definitely against pup-killing crusades. Yellowstone biologist, Robert Crabtree, has commented that, while killing all the pups may be effective, it is unlikely to be acceptable to the human population, in general, and could further damage the reputation of the predator control and sheep industry. Casper Star Tribune, Aug. 17, 1995

Our testimony is that the only predator control methods determined to be "effective solutions" have also been found to be biologically and socially unacceptable. It is for this reason that we emphasize the need to find and fund legitimate methods of reducing depredation: technical support for practices such as guard animals, shed lambing, hiring herders, and reducing or eliminating livestock in areas of historically high predation.

Respectfully submitted,

Leila Stanfield

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U.S. House of Representatives
Committee on Resources
Washington, DC 20515

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DANIEL VAL KISH
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DAVID G. DYE
CHIEF COUNSEL

JOHN LAWRENCE
DEMOCRATIC STAFF DIRECTOR

May 9, 1996

Ms. Leila Stanfield
Biodiversity Associates
P.O. Box 6032
Laramie, Wyoming 82070

Dear Ms. Stanfield:

Attached you will find questions submitted for the record by the Honorable Barbara Cubin. While I apologize for the late timing of these questions, I would ask that you please have your responses back to the Subcommittee as soon as possible. This hearing will be printed and, therefore, we need to have your responses by May 24, 1996.

Again, thank you for testifying before the Subcommittee and for your assistance in helping the Members to better understand this issue.

With best wishes, I am

Sincerely,

Jim Saxton
Chairman
Subcommittee on Fisheries,
Wildlife and Oceans

Enclosure

JS:lr

[A similar letter was sent to witnesses.]

Questions for L. Stanfield

1. In your testimony (page 3) you said "For instance, on one ranch, the researchers did an aerial survey for missing sheep at the end of the summer grazing season and found 100 live sheep that would have died (e.g., from exposure or starvation) had the researchers not been there. Tigner and Larson, p. 250)."

We have reviewed Tigner and Larson, and find this on page 250, "Generally these were not very productive, since the deciduous tress had not yet lost their leaves, but about 100 head from Ranch A were found by aerial search in September 1974."

Question: Is what we found on page 250 of Tigner and Larson where you obtained the information that the sheep would have died from exposure or starvation had the researchers not been there? How did you conclude that the sheep would have died from exposure or starvation from reading page 250 of Tigner and Larson? Did Tigner and Larson write that the sheep would have died from exposure or starvation or is that merely conjecture on your part? (Note: If she replies that she obtained that information from personal correspondence or a personal conversation ask her for a copy of the correspondence or contact Tigner (with the Denver Wildlife Research Center) and ask him to confirm what she says. If he says here statement is true ask for the name of the rancher so you can confirm Tigner's contention with the rancher. In other words close the loop.)

2. On page 4 of your written statement you say, "A number of studies have shown that when the coyote population is subjected to increased mortality (i.e., from lethal predator control), the animals respond by increasing their rate of reproduction and the size of their litters. This effect--known in scientific circles as 'compensatory reproduction'-- results in more young pups that the adult coyotes must feed, a younger-age pack (since there are more young coyotes), and more dispersal of aggressive juveniles (as the young search for and establish their own territories)."

The next two paragraphs of your written statement (page 5) say, "Unfortunately, these very same factors cause an increase, not a decrease in depredation. For instance, in another study on coyote depredation on sheep in south-central Wyoming,8 researchers found that when all adult coyotes and coyote pups were killed in a region,9 predation on sheep dropped by 98.8%. However, when only the coyote pups were killed, depredation still dropped by 91.6% even though adult coyotes were still active in the area. This shows that the vast majority of predation on sheep (i.e., 9 out of 10 losses) is traceable to adult coyotes trying to feed their young. Thus, since lethal control of coyotes increases coyote litter sizes, more sheep depredations will follow.

A number of researchers have therefore concluded that it would be better to stop killing predators and allow the coyote population to mature; older coyotes have fewer pups and are less aggressive. In any case, extensive lethal predator control has not provided a long-term

solution to livestock depredation, and evidence indicates it may actually exacerbate losses."

Question: You did not reference the work of the researchers you say have concluded it would be better to stop killing predators and allow coyote populations to mature. Please provide the studies, by those researchers, to support your statement. Is it your contention that control of coyote pups in an area reduces losses dramatically? Is it your contention that litter size increases in equal proportions ("compensatory reproduction") to the numbers of coyotes removed through lethal control? Your statements that, "...when all adult coyote and coyote pups were killed in a region, predation on sheep dropped by 98.8%" seems to be in direct conflict with your statement that, "... extensive lethal predator control has not provided a long-term solution to livestock depredation, and evidence indicates it may actually exacerbate losses." Please clarify exactly what your position is.

QUESTIONS FOR THE RECORD
GARY SHORMA

1. You state that predator control is offensive to the general public. How is controlling predators offensive to the public? You state in the same sentence that they view control as extermination. Wouldn't it be relatively simple to inform and educate the public of the difference between control and extermination?

2. You state that "there is no question that 100 years of predator control has produced a smarter, better adapted coyote. Is there any factual information to back this up? Are you an expert on evolution?

3. You say that "one state in the west controls coyotes to increase survival of antelope fawns". You never tell which western state this is. Wouldn't it be helpful to reference this state directly? Also this entire analogy sounds as if it is based on no factual evidence. Is it in fact a factual story or not?

4. In your testimony (page 2) you said, "Coyotes, the animals currently at the top of the list of offending predators, have what is called compensatory reproduction. This means elimination of some coyotes competing for food results in greater survival of pups, and you end up with the same number of coyotes". Is it your belief that control of coyote pups in the area reduces losses? Do you also think that litter size increases in equal proportions ("compensatory reproduction") to the numbers of coyotes removed through lethal control?

5. On page 2 of your testimony, you said "$25,000 is a lot of money to spend producing one antelope for harvest". What about other wildlife or livestock this control program might have benefitted? Please provide the study of the predator control program to support your statement.

QUESTIONS FOR THE RECORD
DAN CHU

1. In your testimony (page 1), you said "Many wildlife population studies have repeatedly shown that impacts to game populations from predators is minor when compared to other impacts such as weather and habitat condition. Abnormal losses of game to predators is usually a symptom of the larger problem of poor habitat". You did not reference the studies you say have determined that "there are a few cases where predator control is necessary to maintain healthy populations of game when habitat is in good condition". Please provide the studies to support your statement.

2. On page 2 of your testimony you said "Recent state legislation states the Game and Fish Commission may spend up to four percent of hunting and fishing license fees on predator management and control, estimated at $800,000. The sportsmen in this state want to be assured that their license fee dollars will be spent for the benefit of wildlife and not to fund predator control that subsidizes agricultural commodities". Do you feel that the agricultural community subsidizes sportsmen by providing wildlife with a place to live and food to eat? Ranchers also spend time and money to fix fences that they have watched wildlife run through. If you feel that the agricultural commodities are subsidized, then are sportsmen also subsidized by the agricultural community? Please clarify what you mean by subsidizing agricultural commodities.

3. On the last page of your testimony you say "Indiscriminate attempts at predator control are very costly, ineffective and often kill many non-targeted animals. Poison carcass bait stations attract carrion eaters and not those predators that are inclined to kill. In fact, more often than not, indiscriminate control programs kill off animals that may have beneficial impacts on game populations and agricultural production". You said "A successful targeted coyote control program would focus on eliminating those coyotes that have learned to prey upon livestock while acknowledging the benefits for pest control from coyotes that have not learned to prey on livestock". Please explain how this "successful targeted coyote control program" would work.

4. On the last page of your testimony you said "The Wyoming Wildlife Federation supports pursuing nonlethal preventative means of controlling the impact of predation on game animals and livestock". "The use of sheepdogs, llamas, mules, lambing sheds and an increase in the number of sheepherders, more hands-on management of sheep flocks have paid off by dramatically lowering sheep losses while reducing the amount of money spent on the lethal control of predators". Nonlethal methods of predator control work well in the short-term, but coyotes are very adaptable and have learned how to get around the non-lethal methods. The memo from the Subcommittee staff shows that coyote packs use three basic strategies to get around non-lethal methods such as guard dogs. They are: 1) physically attacking the guard dogs: 2) running the dogs to the point of exhaustion; or 3) using one or two coyotes as diversions on one side of the band while other coyotes attack from the opposite side. Did your research

indicate the cost of protecting the animals that are protecting the sheep? While non-lethal methods may reduce the cost of lethal control, doesn't the increased cost of non-lethal control affect cost effectiveness?

5. You start your testimony with "We firmly believe that predator management must be driven by good data and science not emotion and anecdotes". You also state that "Antelope evolved to run and have large eyes to scan for predators, deer to jump, and birds to fly largely from the pressures of eluding predators". Is there scientific proof to back this up? If so, where did you get your information on evolution? Sounds to me like an anecdote.

6. You say that "presently, there is little hard data supporting the contention that predators are having a significant impact on game populations in Wyoming". Then where is the good science?

7. You say that "field autopsies of coyotes killed by indiscriminate lethal control programs show a high percentage of these animals survived by preying on rodents and insects and actually benefitted agriculture by contributing to pest control". Is there any scientific research to stand behind this statement? Could a population of coyotes ever eat enough rodents and insects to effectively reduce the population? Also, coyotes are pests to farmers and ranchers.

8. You say that the agricultural community is the beneficiary of predator control. Do you know for a fact that they are the only beneficiaries? What about sportsmen? Also, if no one else should have to help pay for this, then why should the agricultural community pay taxes for other programs that they don't benefit from?

9. You mention that predator control should only be used in instances where coyotes have a significant impact on wildlife. In essence what you are saying is that the public shouldn't have to pay for predator control which benefits agriculture, but people in agriculture should help pay for it when significant livestock losses are involved. Am I correct in assuming this?

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QUESTIONS FROM REPRESENTATIVE CUBIN FOR THE U.S. CONGRESSIONAL RECORD RELATING TO PREDATOR CONTROL RESPONSES BY DAN CHU

CUBIN

1. In your testimony, you said, "Many wildlife population studies have repeatedly shown that impacts to game populations from predators is minor when compared to other impacts such as weather and habitat condition. Abnormal losses of game to predators is usually a symptom of the larger problem of poor habitat". You did not reference the studies you say have determined that "there are a few cases where predator control is necessary to maintain healthy populations of game when habitat is in good condition". Please provide the studies to support your statement.

WWF

Attached is some literature on predator control and the importance of habitat. Note the high proportion of a population of predators that need to be taken to result in short term control, and the general lack of evidence that lethal control is effective.

CUBIN

2. In your testimony you said "Recent state legislation states the Game and Fish Commission may spend up to four percent of hunting and fishing license fees on predator management and control, estimated at $800,000. The sportsmen in this state want to be assured that their license fee dollars will be spent for the benefit of wildlife and not to fund predator control that subsidizes agricultural commodities". Do you feel that the agricultural community subsidizes sportsmen by providing wildlife with a place to live and food to eat? Ranchers also spend time and money to fix fences that they have watched wildlife run through. If you feel that the agricultural commodities are subsidized, then are sportsmen also subsidized by the agricultural community? Please clarify what you mean by subsidizing agricultural commodities.

WWF

Agriculture receives property tax breaks, reduced grazing fees on public land, preference in land use, crop price supports, weed and pest control, subsidized or free irrigation water, water developments, fencing of public grazing lands, rural electrification, road maintenance, subsidized fuel, wildlife damage payments, landowner coupons, landowner hunting licenses, predator control, and many breaks and perks that the average citizen does not get. Sportsmen have done a lot in return for them allowing wildlife to survive. Access fees and all of the above indicate the sportsmen aren't subsidized by agriculture.

CUBIN

3. In your testimony you say, "Indiscriminate attempts at predator control are very costly, ineffective and often kill many non-targeted animals. Poison carcass bait stations attract carrion eaters and not those predators that are inclined to kill. In fact, more often than not, indiscriminate control programs kill off animals that may have beneficial impacts on game populations and agricultural production". You said, "A successful targeted coyote control program would focus on eliminating those coyotes that have learned to prey upon livestock while acknowledging the benefits for pest control from coyotes that have not learned to prey on livestock". Please explain how this "successful targeted coyote control program" would work.

WWF

The more targeted your predator control efforts the more successful they will be since the efforts are aimed at identified problem animals. Indiscriminate lethal predator control can actually worsen the problem, knocking out animals that may serve to naturally control numbers of offending animals. With bears and mountain lions in Wyoming, a hunter is sent out to take the animal killing livestock, or the Game and Fish Department removes the offending animal. This invariably causes killing of livestock to cease. Indiscriminate killing of bears and mountain lions, which have a social system where adult males kill or chase away younger animals, often increases depredation on livestock as vacant spaces are occupied by younger, more inexperienced animals that are more likely to turn to killing livestock when food gets scarce. All generalized predator control programs require liberal doses of money for them to reduce numbers of predators. Any successful program would require lots of money. Dividing the amount of money spent in Wyoming on aerial gunning efforts by the number coyotes killed indicates it costs about $275 per coyote for aerial gunning. That is a substantial cost. Finally, research has shown that coyotes that have not learned to kill livestock directly compete with offending animals for territory and resources.

CUBIN

4. In your testimony you said "The Wyoming Wildlife Federation supports pursuing nonlethal preventative means of controlling the impact of predation on game animals and livestock". "the use of sheepdogs, llamas, mules, lambing sheds and an increase in the number of sheepherders, more hands-on management of sheep flocks have paid off by dramatically lowering sheep losses while reducing the amount of money spent on the lethal control of predators". Nonlethal methods of predator control work well in the short-term, but coyotes are very adaptable and have learned how to get around the non-lethal methods. The memo from the Subcommittee staff shows that coyote packs use three basic strategies to get around non-lethal methods such as guard dogs. They are: 1) physically attacking the guard dogs: 2) running the dogs to the point of exhaustion; or 3) using one or two coyotes as diversions on one side of the band while other coyotes attack from the opposite side. Did your research indicate the cost of protecting the animals that are protecting the sheep? While non-lethal methods may reduce the cost of lethal control, doesn't the increased cost of non-lethal control affect cost effectiveness?

WWF
One very good way of limiting the effect of predators without lethal control is maintaining wildlife habitat in good condition. For example, a variety of methods tried to improve the status of duck populations included short hunting seasons, lower bag limits, reductions in numbers of hunters, shooting and trapping predators, and electric fences around ponds. None of these things worked, but two good rainfall years and the presence of thousands of acres of Conservation Reserve Program lands produced the highest number of ducks since the early 1970's. Both lethal and non-lethal control cost money. However, non-targeted lethal control, in addition to monetary costs has secondary costs associated such as other wildlife killed.

I have attached a study regarding the bonding of lambs to cows as a means of non-lethal control. For wildlife, the cost-effectiveness of predator control has been evaluated, and the cost exceeds the revenue derived from the animals produced. Finally, the subcommittee memo you mention intrigues me. It seems to assert that coyotes, ordinarily solitary animals are running in packs. Please send me the documents that support this memo's contention.

CUBIN
5. In your testimony you stated, "We firmly believe that predator management must be driven by good data and science not emotion and anecdotes". You also state that "Antelope evolved to run and have large eyes to scan for predator, deer to jump, and birds to fly largely from the pressures of eluding predators". Is there scientific proof to back this up? If so, where did you get your information on evolution? Sounds to me like an anecdote.

WWF
Nearly all discussions of evolution in science text books cite pressure from predators as the major reason animals now in existence develop the physical characteristics they possess. Large eyes, sensitive ears, and exceptional speed are used to locate and avoid predators, even the stomach evolved so that animals could gulp down food which can later be digested in a safe place. All of these natural attributes arose from the pressures of predation. For an interesting book on evolution, I recommend Origin of Species by Charles Darwin.

CUBIN
6. You say that "presently, there is little hard data supporting the contention that predators are having a significant impact on game populations in Wyoming". Then where is the good science?

WWF
There has been a large amount of data collected by the Wyoming Game and Fish Department regarding big game in Wyoming. None of this data indicates there are

significant problems with predator impacts on big game. In fact, until the winter of 1992-93 and a cold, wet spring, Wyoming had high numbers of deer and antelope along with high numbers of predators such as coyotes.

CUBIN
7. You say that "field autopsies of coyotes killed by indiscriminate lethal control programs show a high percentage of these animals survived by preying on rodents and insects and actually benefited agriculture by contributing to pest control". Is there any scientific research to stand behind this statement? Could a population of coyotes ever eat enough rodents and insects to effectively reduce the population? also, coyotes are pests to farmers and ranchers.

WWF
If a population of coyotes couldn't eat enough rodents to reduce the population, as you state in your question, there is no reason to worry about their effect on big game. Data collected by the Animal Damage Control program from thousands of stomachs of coyotes collected in the West will back up my statement. Not all farmers and ranchers regard coyotes as pests. Some regard them as helpful in maintaining a balance of rodent and insect populations, and believe it or not, some enjoy seeing coyotes and regard them as wildlife.

CUBIN
8. You say that the agricultural community is the beneficiary of predator control. do you know for a fact that they are the only beneficiaries? What about sportsmen? Also, if no one else should have to help pay for this, then why should the agricultural community pay taxes for other programs that they don't benefit from?

WWF
*First, in my statement I clearly said, "**When** the beneficiary of a predator control program is soley the agriculture community they should bear the financial responsibility for the program". WWF believes some representatives of agricultural special interests groups are using anecdotes of predators severely impacting game populations as a ruse to secure more Game and Fish dollars to support predator control programs that do not benefit sportsmen.*

For instance, in testimony given by Farm Bureau representative Larry Bourret at the hearing regarding alternative funding for predator control he stated "use Dingell-Johnson funds in the states to reimburse livestock producers for their losses to predatory animals. Those funds are appropriated for use in providing habitat, and if lambs and calves are the habitat for predatory animals, then it appears compensation would be a legal use of funds". I remind you that Dingell-Johnson funds are raised by taxing fishermen on fishing gear and boat fuel These funds are to be used for sports fisheries restoration and boat access.

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Most hunters and wildlife managers accept coyotes and other predators as wildlife and integral to a healthy ecosystem. Those in the agricultural community who want numbers of predators reduced, do so for economic reasons. If Congress believes all of the American public want predators controlled, Congress should ask the public as a whole to fund the program not just hunters. There is no evidence that predator control has been of benefit to hunters, only a presumption, only a presumption on the part of those with a vested interest in making the public at large believe eliminating predators is necessary for everyone. There have been 3 peaks of big game numbers in Wyoming since 1975 despite the lack of predator control. These were all determined by the weather and habitat condition, not numbers of predators.

CUBIN

9. You mention that predator control should only be used in instances where coyotes have a significant impact on wildlife. In essence what you are saying is that the public shouldn't have to pay for predator control which benefits agriculture, but people in agriculture should help pay for it when significant livestock losses are involved. Am I correct in assuming this?

WWF

All I am saying that those who want the benefits should pay the costs. Hunters want big game to exist in large numbers, so they fund management programs, and even tax themselves to provide extra funding. If woolgrowers feel they need to control numbers of coyotes to reduce predation on livestock, they should pay for that control, it is a cost of doing business.

[Committee Note: Attachments were placed in Subcommittee files.]

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